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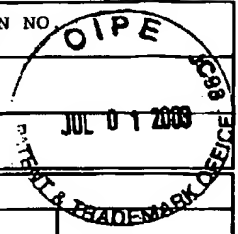
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| FORM PTO-1449<br><br><u>SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT</u> | ATTY. DOCKET NO.<br>1744.1200001 | APPLICATION NO<br>09/987,193 |
|   | APPLICANT<br>Rawlins et al.      |                              |
|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                |



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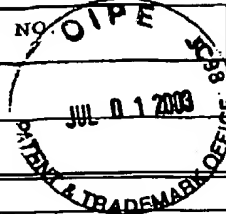
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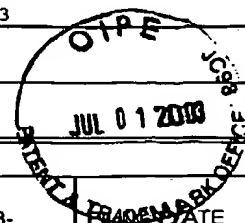
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|  | APPLICANT<br>Rawlins et al.      |  |
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|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |
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## INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.  
1744.1200001APPLICATION NO.  
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|                     | AE3 | 3,384,822          | 05/1968 | Miyagi      |       |               |             |
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|                     | AL3 | EP 0 486 095 A1 ✓ | 05/1992 | EP      | H03D  | 3/00          | N/A         |
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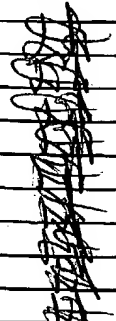
APPLICATION NO.  
 09/987,193

APPLICANT  
 Rawlins et al.

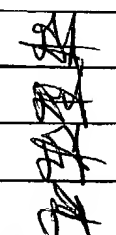
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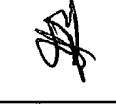

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|  | AL4 | EP 0 512 748 B1 ✓ | 11/1998 | EP      | H04N  | 9/64          | N/A         |
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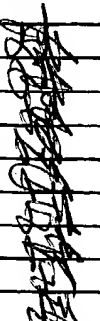
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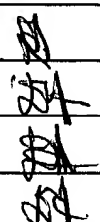
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2124**U.S. PATENT DOCUMENTS**

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|  | AR | 6 | Copy of Declaration of Alex Holtz filed in patent application Ser. No. 09/176,022, which is directed to related subject matter, 3 pages.   |

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|  | AN | 7 | Copy of Declaration of Richard C. Looke filed in patent application Ser. No. 09/176,022, which is directed to related subject matter, 2 pages. ✓  |
|  | AO | 7 | Copy of Declaration of Charley D. Moses, Jr. filed in patent application Ser. No. 09/176,022, which is directed to related subject matter, 2 pages. ✓   |
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|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |

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|                  | AG9 | 4,481,490       | 11/1984 | Huntley       |       |           |             |
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|   | APPLICANT<br>Rawlins et al.      |                               |
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|  | AQ | 10 | Gilchrist, B. et al., "Sampling hikes performance of frequency synthesizers," <i>Microwaves &amp; RF</i> , Hayden Publishing, Vol. 23, No. 1, pp. 93-94 and 110 (January 1984).   |
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|                     | AA11 | 4,602,220          | 07/1986 | Kurihara          |       |               |             |
|                     | AB11 | 4,603,300          | 07/1986 | Welles, II et al. |       |               |             |
|                     | AC11 | 4,612,464          | 09/1986 | Ishikawa et al.   |       |               |             |
|                     | AD11 | 4,612,518          | 09/1986 | Gans et al.       |       |               |             |
|                     | AE11 | 4,616,191          | 10/1986 | Galani et al.     |       |               |             |
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|                     | AK11 | FR 2 245 130 ✓    | 04/1975 | FR      | H03K  | 5/13          | Yes<br>(See AP50) |
|                     | AL11 | DE 35 41 031 A1 ✓ | 05/1986 | DE      | H03D  | 3/00          | Yes<br>(See AR50) |
|                     | AM11 | EP 0 732 803 A1 ✓ | 09/1996 | EP      | H03D  | 3/00          | Yes<br>(See AN51) |

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|  | AN | 11 | Gregorian, R. et al., "Switched-Capacitor Circuit Design," <i>Proceedings of the IEEE</i> , IEEE, Vol. 71, No. 8, pp. 941-966 (August 1983).  |
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|  | AR | 11 | Haddon, J. and Vilar, E., "Scattering Induced Microwave Scintillations from Clear Air and Rain on Earth Space Paths and the Influence of Antenna Aperture," <i>IEEE Transactions on Antennas and Propagation</i> , IEEE, Vol. AP-34, No. 5, pp. 646-657 (May 1986). |

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|                     | AA12 | 4,651,034          | 03/1987 | Sato            |       |               |             |
|                     | AB12 | 4,675,882          | 06/1987 | Lillie et al.   |       |               |             |
|                     | AC12 | 4,688,253          | 08/1987 | Gumm            |       |               |             |
|                     | AD12 | 4,716,376          | 12/1987 | Daudelin        |       |               |             |
|                     | AE12 | 4,716,388          | 12/1987 | Jacobs          |       |               |             |
|                     | AF12 | 4,718,113          | 01/1988 | Rother et al.   |       |               |             |
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|                     | AH12 | 4,733,403          | 03/1988 | Simone          |       |               |             |
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|                     | AJ12 | DE 197 35 798 C1 ✓   | 07/1998 | DE      | H04L  | 27/00         | Yes<br>(See AP51) |
|                     | AK12 | WO 98/40968 A2&A3 ✓  | 09/1998 | PCT     | H03L  | 7/08          | N/A               |
|                     | AL12 | EP 0 529 836 A1 ✓    | 03/1993 | EP      | H03L  | 7/089         | N/A               |
|                     | AM12 | EP 0 795 955 A2&A3 ✓ | 09/1997 | EP      | H03D  | 13/00         | N/A               |

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|                     | AB13 | 4,743,858          | 05/1988 | Everard          |       |               |             |
|                     | AC13 | 4,745,463          | 05/1988 | Lu               |       |               |             |
|                     | AD13 | 4,751,468          | 06/1988 | Agoston          |       |               |             |
|                     | AE13 | 4,757,538          | 07/1988 | Zink             |       |               |             |
|                     | AF13 | 4,768,187          | 08/1988 | Marshall         |       |               |             |
|                     | AG13 | 4,769,612          | 09/1988 | Tamakoshi et al. |       |               |             |
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|                     | AK13 | WO 91/18445 A1 ✓     | 11/1991 | PCT     | H03D  | 7/18          | N/A         |
|                     | AL13 | WO 99/23755 A1 ✓     | 05/1999 | PCT     | H03D  | 7/16          | N/A         |
|                     | AM13 | JP 56-114451 ✓       | 09/1981 | JP      | H04B  | 7/02          | No          |

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|  | AQ | 13 | Hung, H-L. A. et al., "Characterization of Microwave Integrated Circuits Using An Optical Phase-Locking and Sampling System," <i>IEEE MTT-S Digest</i> , IEEE, pp. 507-510 (1991).   |
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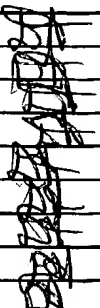
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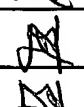
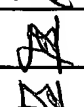
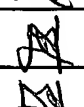
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

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|  | AA14 | 4,801,823          | 01/1989 | Yokoyama           |       |               |             |
|   | AB14 | 4,806,790          | 02/1989 | Sone               |       |               |             |
|   | AC14 | 4,810,904          | 03/1989 | Crawford           |       |               |             |
|   | AD14 | 4,810,976          | 03/1989 | Cowley et al.      |       |               |             |
|   | AE14 | 4,811,362          | 03/1989 | Yester, Jr. et al. |       |               |             |
|   | AF14 | 4,819,252          | 04/1989 | Christopher        |       |               |             |
|   | AG14 | 4,833,445          | 05/1989 | Buchele            |       |               |             |
|   | AH14 | 4,862,121          | 08/1989 | Hochschild et al.  |       |               |             |
|   | AI14 | 4,868,654          | 09/1989 | Juri et al.        |       |               |             |

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|   | AJ14 | JP 8-32556 ✓    | 02/1996 | JP      | H04L  | 1/04          | No          |
|  | AK14 | JP 8-139524 ✓   | 05/1996 | JP      | H03D  | 7/00          | No          |
|  | AL14 | JP 59-144249 ✓  | 08/1984 | JP      | H04L  | 27/00         | No          |
|  | AM14 | JP 63-54002 ✓   | 03/1988 | JP      | H03B  | 19/114        | No          |

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|  | AO ✓ | 14 | Janssen, J.M.L., "An Experimental 'Stroboscopic' Oscilloscope for Frequencies up to about 50 Mc/s: I. Fundamentals," <i>Philips Technical Review</i> , Philips Research Laboratories, Vol. 12, No. 2, pp. 52-59 (August 1950).                              |
|  | AP ✓ | 14 | Janssen, J.M.L. and Michels, A.J., "An Experimental 'Stroboscopic' Oscilloscope for Frequencies up to about 50 Mc/s: II. Electrical Build-Up," <i>Philips Technical Review</i> , Philips Research Laboratories, Vol. 12, No. 3, pp. 73-82 (September 1950). |
|  | AQ ✓ | 14 | Jondral, V.F. et al., "Doppler Profiles for Communication Satellites," <i>Frequenz</i> , Herausberger, pp. 111-116 (May-June 1996).   |
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|                     | AA15 | 4,870,659          | 09/1989 | Oishi et al.        |       |               |             |
|                     | AB15 | 4,871,987          | 10/1989 | Kawase              |       |               |             |
|                     | AC15 | 4,885,587          | 12/1989 | Wiegand et al.      |       |               |             |
|                     | AD15 | 4,885,756          | 12/1989 | Fontanes et al.     |       |               |             |
|                     | AE15 | 4,888,557          | 12/1989 | Puckette, IV et al. |       |               |             |
|                     | AF15 | 4,890,302          | 12/1989 | Mulwijk             |       |               |             |
|                     | AG15 | 4,893,316          | 01/1990 | Janc et al.         |       |               |             |
|                     | AH15 | 4,893,341          | 01/1990 | Gehring             |       |               |             |
|                     | AI15 | 4,894,766          | 01/1990 | De Agro             |       |               |             |

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|                     | AJ15 | JP 6-237276 ✓   | 08/1994 | JP      | H04L  | 27/20         | No                     |
|                     | AK15 | JP 8-23359 ✓    | 01/1996 | JP      | H04L  | 27/20         | No                     |
|                     | AL15 | JP 47-2314 ✓    | 02/1972 | JP      | --    | --            | Yes<br>(Doc. AP53)     |
|                     | AM15 | JP 58-7903 ✓    | 01/1983 | JP      | H03C  | 1/02          | Partial<br>(Doc. AQ53) |

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|  | AO | 15 ✓ | Kirsten, J. and Fleming, J., "Undersampling reduces data-acquisition costs for select applications," <i>EDN</i> , Cahners Publishing, Vol. 35, No. 13, pp. 217-222, 224, 226-228 (June 21, 1990).   |
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|  | AQ | 15 ✓ | Lam, W.K. et al., "Wideband sounding of 11.6 Ghz transhorizon channel," <i>Electronics Letters</i> , IEE, Vol. 30, No. 9, pp. 738-739 (April 28, 1994).   |
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|---------------------|------|--------------------|---------|--------------------|-------|---------------|-------------|
|                     | AA16 | 4,896,152          | 01/1990 | Tiemann            |       |               |             |
|                     | AB16 | 4,902,979          | 02/1990 | Puckette, IV       |       |               |             |
|                     | AC16 | 4,908,579          | 03/1990 | Tawfik et al.      |       |               |             |
|                     | AD16 | 4,910,752          | 03/1990 | Yester, Jr. et al. |       |               |             |
|                     | AE16 | 4,914,405          | 04/1990 | Wells              |       |               |             |
|                     | AF16 | 4,920,510          | 04/1990 | Senderowicz et al. |       |               |             |
|                     | AG16 | 4,922,452          | 05/1990 | Larsen et al.      |       |               |             |
|                     | AH16 | 4,931,921          | 06/1990 | Anderson           |       |               |             |
|                     | AI16 | 4,944,025          | 07/1990 | Gehring et al.     |       |               |             |

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|                     | AJ16 | JP 58-133004 ✓  | 08/1983 | JP      | H03D  | 1/00          | No          |
|                     | AK16 | JP 60-58705 ✓   | 04/1985 | JP      | H03D  | 7/00          | No          |
|                     | AL16 | JP 4-123614 ✓   | 04/1992 | JP      | H03K  | 19/0175       | No          |
|                     | AM16 | JP 4-127601 ✓   | 04/1992 | JP      | H03D  | 7/00          | No          |

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|  | AN | ✓ 16 | Lau, W.H. et al., "Analysis of the Time Variant Structure of Microwave Line-of-sight Multipath Phenomena," <i>IEEE Global Telecommunications Conference &amp; Exhibition</i> , IEEE, pp. 1707-1711 (November 28 - December 1, 1988).  |
|  | AO | ✓ 16 | Lau, W.H. et al., "Improved Prony Algorithm to Identify Multipath Components," <i>Electronics Letters</i> , IEE, Vol. 23, No. 20, pp. 1059-1060 (September 24, 1987).   |
|  | AP | ✓ 16 | Lesage, P. and Audoin, C., "Effect of Dead-Time on the Estimation of the Two-Sample Variance," <i>IEEE Transactions on Instrumentation and Measurement</i> , IEEE Instrumentation and Measurement Society, Vol. IM-28, No. 1, pp. 6-10 (March 1979).                                |
|  | AQ | ✓ 16 | Liechti, C.A., "Performance of Dual-gate GaAs MESFET's as Gain-Controlled Low-Noise Amplifiers and High-Speed Modulators," <i>IEEE Transactions on Microwave Theory and Techniques</i> , IEEE Microwave Theory and Techniques Society, Vol. MTT-23, No. 6, pp. 461-469 (June 1975). |
|  | AR | ✓ 16 | Linnenbrink, T.E. et al., "A One Gigasample Per Second Transient Recorder," <i>IEEE Transactions on Nuclear Science</i> , IEEE Nuclear and Plasma Sciences Society, Vol. NS-26, No. 4, pp. 4443-4449 (August 1979).   |

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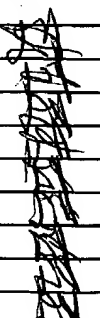
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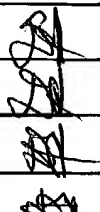
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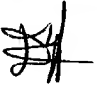


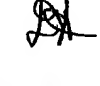

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| EXAMINER<br>INITIAL   |      | DOCUMENT<br>NUMBER | DATE    | NAME              | CLASS | SUB-<br>CLASS | FILING DATE |
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|  | AA17 | 4,955,079          | 09/1990 | Connerney et al.  |       |               |             |
|   | AB17 | 4,965,467          | 10/1990 | Bilkerijst        |       |               |             |
|   | AC17 | 4,967,160          | 10/1990 | Quienvy et al.    |       |               |             |
|   | AD17 | 4,970,703          | 11/1990 | Hariharan et al.  |       |               |             |
|   | AE17 | 4,982,353          | 01/1991 | Jacob et al.      |       |               |             |
|   | AF17 | 4,984,077          | 01/1991 | Uchida            |       |               |             |
|   | AG17 | 4,995,055          | 02/1991 | Weinberger et al. |       |               |             |
|   | AH17 | 5,003,621          | 03/1991 | Gailus            |       |               |             |
|   | AI17 | 5,005,169          | 04/1991 | Bronder et al.    |       |               |             |

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|--|------|-----------------|---------|---------|-------|---------------|-------------|
|  | AJ17 | JP 5-175730 ✓   | 07/1993 | JP      | H03D  | 1/00          | No          |
|  | AK17 | JP 5-175734 ✓   | 07/1993 | JP      | H03D  | 3/00          | No          |
|  | AL17 | JP 7-154344 ✓   | 06/1995 | JP      | H04B  | 14/06         | No          |
|  | AM17 | JP 7-307620 ✓   | 11/1995 | JP      | H03D  | 1/18          | No          |

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|  | AN | 17 ✓ | Liou, M.L., "A Tutorial on Computer-Aided Analysis of Switched-Capacitor Circuits," <i>Proceedings of the IEEE</i> , IEEE, Vol. 71, No. 8, pp. 987-1005 (August 1983).   |
|  | AO | 17 ✓ | Lo, P. et al., "Coherent Automatic Gain Control," <i>IEE Colloquium on Phase Locked Techniques</i> , IEE, pp. 2/1-2/6 (March 26, 1980).  |
|  | AP | 17 ✓ | Lo, P. et al., "Computation of Rain Induced Scintillations on Satellite Down-Links at Microwave Frequencies," <i>Third International Conference on Antennas and Propagation (ICAP 83)</i> , pp. 127-131 (April 12-15, 1983). |
|  | AQ | 17 ✓ | Lo, P.S.L.O. et al., "Observations of Amplitude Scintillations on a Low-Elevation Earth-Space Path," <i>Electronics Letters</i> , IEE, Vol. 20, No. 7, pp. 307-308 (March 29, 1984).   |
|  | AR | 17 ✓ | Madani, K. and Aithison, C.S., "A 20 Ghz Microwave Sampler," <i>IEEE Transactions on Microwave Theory and Techniques</i> , IEEE Microwave Theory and Techniques Society, Vol. 40, No. 10, pp. 1960-1963 (October 1992).      |

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FORM PTO-1449

## INFORMATION DISCLOSURE STATEMENT

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| EXAMINER<br>INITIAL |      | DOCUMENT<br>NUMBER | DATE    | NAME              | CLASS | SUB-<br>CLASS | FILING DATE |
|---------------------|------|--------------------|---------|-------------------|-------|---------------|-------------|
|                     | AA18 | 5,006,810          | 04/1991 | Popescu           |       |               |             |
|                     | AB18 | 5,010,585          | 04/1991 | Garcia            |       |               |             |
|                     | AC18 | 5,014,304          | 05/1991 | Nicollini et al.  |       |               |             |
|                     | AD18 | 5,015,963          | 05/1991 | Sutton            |       |               |             |
|                     | AE18 | 5,017,924          | 05/1991 | Guiberteau et al. |       |               |             |
|                     | AF18 | 5,020,149          | 05/1991 | Hemmie            |       |               |             |
|                     | AG18 | 5,020,154          | 05/1991 | Zierhut           |       |               |             |
|                     | AH18 | 5,052,050          | 09/1991 | Collier et al.    |       |               |             |
|                     | AI18 | 5,065,409          | 11/1991 | Hughes et al.     |       |               |             |

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|---------------------|------|----------------------|---------|---------|-------|---------------|-------------|
|                     | AJ18 | JP 55-66057 ✓        | 05/1980 | JP      | G06K  | 7/10          | No          |
|                     | AK18 | JP 63-65587 ✓        | 03/1988 | JP      | G06K  | 7/10          | No          |
|                     | AL18 | JP 63-153691 ✓       | 06/1988 | JP      | G06K  | 17/00         | No          |
|                     | AM18 | EP 0 276 130 A2&A3 ✓ | 07/1988 | EP      | H03D  | 7/00          | N/A         |

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|  | AN | ✓<br>18 | Marsland, R.A. et al., "130 Ghz GaAs monolithic integrated circuit sampling head," <i>Appl. Phys. Lett.</i> , American Institute of Physics, Vol. 55, No. 6, pp. 592-594 (August 7, 1989).  |
|  | AO | ✓<br>18 | Martin, K. and Sedra, A.S., "Switched-Capacitor Building Blocks for Adaptive Systems," <i>IEEE Transactions on Circuits and Systems</i> , IEEE Circuits and Systems Society, Vol. CAS-28, No. 6, pp. 576-584 (June 1981).   |
|  | AP | ✓<br>18 | Marzano, F.S. and d'Auria, G., "Model-based Prediction of Amplitude Scintillation variance due to Clear-Air Tropospheric Turbulence on Earth-Satellite Microwave Links," <i>IEEE Transactions on Antennas and Propagation</i> , IEEE Antennas and Propagation Society, Vol. 46, No. 10, pp. 1506-1518 (October 1998). |
|  | AQ | ✓<br>18 | Matricciani, E., "Prediction of fade durations due to rain in satellite communication systems," <i>Radio Science</i> , American Geophysical Union, Vol. 32, No. 3, pp. 935-941 (May-June 1997).   |
|  | AR | ✓<br>18 | McQueen, J.G., "The Monitoring of High-Speed Waveforms," <i>Electronic Engineering</i> , Morgan Brothers Limited, Vol. XXIV, No. 296, pp. 436-441 (October 1952).   |

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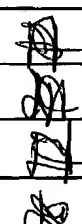
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|---|------|--------------------|---------|--------------|-------|---------------|-------------|
|  | AA19 | 5,083,050          | 01/1992 | Vasile       |       |               |             |
|   | AB19 | 5,091,921          | 02/1992 | Minami       |       |               |             |
|   | AC19 | 5,095,533          | 03/1992 | Loper et al. |       |               |             |
|   | AD19 | 5,095,536          | 03/1992 | Loper        |       |               |             |
|   | AE19 | 5,111,152          | 05/1992 | Makino       |       |               |             |
|   | AF19 | 5,113,094          | 05/1992 | Grace et al. |       |               |             |
|   | AG19 | 5,113,129          | 05/1992 | Hughes       |       |               |             |
|   | AH19 | 5,122,765          | 06/1992 | Pataut       |       |               |             |
|   | AI19 | 5,124,592          | 06/1992 | Hagino       |       |               |             |

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|  | AJ19 | WO 95/01006 A1 ✓    | 01/1995 | PCT     | H03M  | 1/66          | N/A         |
|  | AK19 | WO 97/08839 A2&A3 ✓ | 03/1997 | PCT     | H04B  | 1/04          | N/A         |
|  | AL19 | EP 0 254 844 A2 ✓   | 02/1988 | EP      | H03D  | 7/00          | N/A         |
|  | AM19 | EP 0 632 577 A1 ✓   | 01/1995 | EP      | H03D  | 7/16          | N/A         |

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|  | AN | 19 ✓ | Merkelo, J. and Hall, R.D., "Broad-Band Thin-Film Signal Sampler," <i>IEEE Journal of Solid-State Circuits</i> , IEEE, Vol. SC-7, No. 1, pp. 50-54 (February 1972).  |
|  | AO | 19 ✓ | Merlo, U. et al., "Amplitude Scintillation Cycles in a Sirio Satellite-Earth Link," <i>Electronics Letters</i> , IEE, Vol. 21, No. 23, pp. 1094-1096 (November 7, 1985).   |
|  | AP | 19 ✓ | Morris, D., "Radio-holographic reflector measurement of the 30-m millimeter radio telescope at 22 Ghz with a cosmic signal source," <i>Astronomy and Astrophysics</i> , Springer-Verlag, Vol. 203, No. 2, pp. 399-406 (September (II) 1988).     |
|  | AQ | 19 ✓ | Moulsley, T.J. et al., "The efficient acquisition and processing of propagation statistics," <i>Journal of the Institution of Electronic and Radio Engineers</i> , IERE, Vol. 55, No. 3, pp. 97-103 (March 1985).                                |
|  | AR | 19 ✓ | Ndizi, D. et al., "Wide-Band Statistical Characterization of an Over-the-Sea Experimental Transhorizon Link," <i>IEE Colloquium on Radio Communications at Microwave and Millimetre Wave Frequencies</i> , IEE, pp. 1/1-1/6 (December 16, 1996). |

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|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |

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| EXAMINER<br>INITIAL |  | DOCUMENT<br>NUMBER | DATE      | NAME    | CLASS           | SUB-<br>CLASS | FILING DATE |
|---------------------|--|--------------------|-----------|---------|-----------------|---------------|-------------|
|                     |  | AA20               | 5,136,267 | 08/1992 | Cabot           |               |             |
|                     |  | AB20               | 5,140,705 | 08/1992 | Kosuga          |               |             |
|                     |  | AC20               | 5,150,124 | 09/1992 | Moore et al.    |               |             |
|                     |  | AD20               | 5,151,661 | 09/1992 | Caldwell et al. |               |             |
|                     |  | AE20               | 5,159,710 | 10/1992 | Cusdin          |               |             |
|                     |  | AF20               | 5,170,414 | 12/1992 | Silvian         |               |             |
|                     |  | AG20               | 5,172,070 | 12/1992 | Hiraiwa et al.  |               |             |
|                     |  | AH20               | 5,191,459 | 03/1993 | Thompson et al. |               |             |
|                     |  | AI20               | 5,204,642 | 04/1993 | Ashgar et al.   |               |             |

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| EXAMINER<br>INITIAL |  | DOCUMENT NUMBER | DATE           | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION                |
|---------------------|--|-----------------|----------------|---------|-------|---------------|----------------------------|
|                     |  | AJ20            | JP 60-130203 ✓ | 07/1985 | JP    | H03D          | 7/00<br>Yes<br>(Doc. AO56) |
|                     |  | AK20            |                |         |       |               | Yes<br>No                  |
|                     |  | AL20            |                |         |       |               | Yes<br>No                  |
|                     |  | AM20            |                |         |       |               | Yes<br>No                  |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|  |    |      |   |
|--|----|------|---|
|  | AN | 20 ✓ | Ndizi, D. et al., "Wideband Statistics of Signal Levels and Doppler Spread on an Over-The-Sea Transhorizon Link," <i>IEE Colloquium on Propagation Characteristics and Related System Techniques for Beyond Line-of-Sight Radio</i> , IEE, pp. 9/1-9/6 (November 24, 1997). |
|  | AO | 20 ✓ | "New zero IF chipset from Philips," <i>Electronic Engineering</i> , United News & Media, Vol. 67, No. 825, p. 10 (September 1995).  |
|  | AP | 20 ✓ | Ohara, H. et al., "First monolithic PCM filter cuts cost of telecomm systems," <i>Electronic Design</i> , Hayden Publishing Company, Vol. 27, No. 8, pp. 130-135 (April 12, 1979).  |
|  | AQ | 20 ✓ | Oppenheim, A.V. et al., <i>Signals and Systems</i> , Prentice-Hall, pp. 527-531 and 561-562 (1983).   |
|  | AR | 20 ✓ | Orgies, G., "Experimental Parameters Affecting Amplitude Scintillation Measurements on Satellite Links," <i>Electronics Letters</i> , IEE, Vol. 21, No. 17, pp. 771-772 (August 15, 1985).  |

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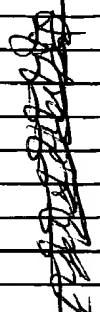
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|---|------|--------------------|---------|---------------|-------|---------------|-------------|
|  | AA21 | 5,212,827          | 05/1993 | Meszko et al. |       |               |             |
|   | AB21 | 5,214,787          | 05/1993 | Karkota, Jr.  |       |               |             |
|   | AC21 | 5,220,583          | 06/1993 | Solomon       |       |               |             |
|   | AD21 | 5,220,680          | 06/1993 | Lee           |       |               |             |
|   | AE21 | 5,222,144          | 06/1993 | Whitehart     |       |               |             |
|   | AF21 | 5,230,097          | 07/1993 | Currie et al. |       |               |             |
|   | AG21 | 5,239,686          | 08/1993 | Downey        |       |               |             |
|   | AH21 | 5,241,561          | 08/1993 | Barnard       |       |               |             |
|   | AI21 | 5,249,203          | 09/1993 | Loper         |       |               |             |

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| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ21 |                 |      |         |       |               | Yes<br>No   |
|                     | AK21 |                 |      |         |       |               | Yes<br>No   |
|                     | AL21 |                 |      |         |       |               | Yes<br>No   |
|                     | AM21 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|   |    |      |   |
|---|----|------|---|
|  | AN | 21 ✓ | Pärssinen et al., "A 2-GHz Subharmonic Sampler for Signal Downconversion," <i>IEEE Transactions on Microwave Theory and Techniques</i> , IEEE, Vol. 45, No. 12, 7 pages (December 1997).  |
|  | AO | 21 ✓ | Peeters, G. et al., "Evaluation of Statistical Models for Clear-Air Scintillation Prediction Using Olympus Satellite Measurements," <i>International Journal of Satellite Communications</i> , John Wiley and Sons, Vol. 15, No. 2, pp. 73-88 (March-April 1997). |
|  | AP | 21 ✓ | Perrey, A.G. and Schoenwetter, H.K., <i>NBS Technical Note 1121: A Schottky Diode Bridge Sampling Gate</i> , U.S. Dept. of Commerce, pp. 1-14 (May 1980).   |
|  | AQ | 21 ✓ | Poulton, K. et al., "A 1-GHz 6-bit ADC System," <i>IEEE Journal of Solid-State Circuits</i> , IEEE, Vol. SC-22, No. 6, pp. 962-969 (December 1987).   |
|  | AR | 21 ✓ | Press Release, "Parkervision, Inc. Announces Fiscal 1993 Results," Lippert/Heilshorn and Associates, 2 Pages (April 6, 1994).   |

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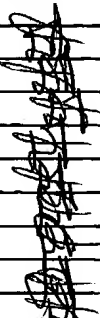
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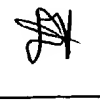

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|  | AA22 | 5,251,218          | 10/1993 | Stone et al.  |       |               |             |
|   | AB22 | 5,251,232          | 10/1993 | Nonami        |       |               |             |
|   | AC22 | 5,260,970          | 11/1993 | Henry et al.  |       |               |             |
|   | AD22 | 5,263,194          | 11/1993 | Ragan         |       |               |             |
|   | AE22 | 5,263,196          | 11/1993 | Jasper        |       |               |             |
|   | AF22 | 5,267,023          | 11/1993 | Kawasaki      |       |               |             |
|   | AG22 | 5,278,826          | 01/1994 | Murphy et al. |       |               |             |
|   | AH22 | 5,282,023          | 01/1994 | Scarpa        |       |               |             |
|   | AI22 | 5,287,516          | 02/1994 | Schaub        |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ22 |                 |      |         |       |               | Yes<br>No   |
|                     | AK22 |                 |      |         |       |               | Yes<br>No   |
|                     | AL22 |                 |      |         |       |               | Yes<br>No   |
|                     | AM22 |                 |      |         |       |               | Yes<br>No   |

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|   |    |             |   |
|---|----|-------------|---|
|  | AN | <u>22</u> ✓ | Press Release, "Parkervision, Inc. Announces the Appointment of Michael Baker to the New Position of National Sales Manager," Lippert/Heilshorn and Associates, 1 Page (April 7, 1994). |
|  | AO | <u>22</u> ✓ | Press Release, "Parkervision's Cameraman Well-Received By Distance Learning Market," Lippert/Heilshorn and Associates, 2 Pages (April 8, 1994).   |
|  | AP | <u>22</u> ✓ | Press Release, "Parkervision, Inc. Announces First Quarter Financial Results," Lippert/Heilshorn and Associates, 2 Pages (April 26, 1994).  |
|  | AQ | <u>22</u> ✓ | Press Release, "Parkervision, Inc. Announces The Retirement of William H. Fletcher, Chief Financial Officer," Lippert/Heilshorn and Associates, 1 Page (May 11, 1994).                  |
|  | AR | <u>22</u> ✓ | Press Release, "Parkervision, Inc. Announces New Cameraman System II™ At Infocomm Trade Show," Lippert/Heilshorn and Associates, 3 Pages (June 9, 1994).                                |

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|------------------|------|-----------------|---------|----------------|-------|-----------|-------------|
|                  | AA23 | 5,293,398       | 03/1994 | Hamao et al.   |       |           |             |
|                  | AB23 | 5,303,417       | 04/1994 | Laws           |       |           |             |
|                  | AC23 | 5,307,517       | 04/1994 | Rich           |       |           |             |
|                  | AD23 | 5,315,583       | 05/1994 | Murphy et al.  |       |           |             |
|                  | AE23 | 5,321,852       | 06/1994 | Seong          |       |           |             |
|                  | AF23 | 5,325,204       | 06/1994 | Scarpa         |       |           |             |
|                  | AG23 | 5,337,014       | 08/1994 | Najle et al.   |       |           |             |
|                  | AH23 | 5,339,054       | 08/1994 | Taguchi        |       |           |             |
|                  | AI23 | 5,339,459       | 08/1994 | Schiltz et al. |       |           |             |

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|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ23 |                 |      |         |       |           | Yes<br>No   |
|                  | AK23 |                 |      |         |       |           | Yes<br>No   |
|                  | AL23 |                 |      |         |       |           | Yes<br>No   |
|                  | AM23 |                 |      |         |       |           | Yes<br>No   |

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|  |    |      |  |
|--|----|------|--|
|  | AN | 23 ✓ | Press Release, "Parkervision, Inc. Announces Appointments to its National Sales Force," Lippert/Heilshorn and Associates, 2 Pages (June 17, 1994).                     |
|  | AO | 23 ✓ | Press Release, "Parkervision, Inc. Announces Second Quarter and Six Months Financial Results," Lippert/Heilshorn and Associates, 3 Pages (August 9, 1994).             |
|  | AP | 23 ✓ | Press Release, "Parkervision, Inc. Announces Third Quarter and Nine Months Financial Results," Lippert/Heilshorn and Associates, 3 Pages (October 28, 1994).           |
|  | AQ | 23 ✓ | Press Release, "Parkervision, Inc. Announces First Significant Dealer Sale of its Cameraman® System II," Lippert/Heilshorn and Associates, 2 Pages (November 7, 1994). |
|  | AR | 23 ✓ | Press Release, "Parkervision, Inc. Announces Fourth Quarter and Year End Results," Lippert/Heilshorn and Associates, 2 Pages (March 1, 1995).                          |

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| FORM PTO-1449<br>INFORMATION DISCLOSURE STATEMENT | ATTY. DOCKET NO.<br>1744.1200001   | APPLICATION NO.<br>09/987,193 |
|   | APPLICANT<br>Rawlins <i>et al.</i> |                               |
|   | FILING DATE<br>November 13, 2001   | GROUP<br>2124                 |

## U.S. PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE    | NAME                    | CLASS | SUB-CLASS | FILING DATE |
|------------------|------|-----------------|---------|-------------------------|-------|-----------|-------------|
|                  | AA24 | 5,355,114       | 10/1994 | Sutterlin <i>et al.</i> |       |           |             |
|                  | AB24 | 5,361,408       | 11/1994 | Watanabe <i>et al.</i>  |       |           |             |
|                  | AC24 | 5,369,800       | 11/1994 | Takagi <i>et al.</i>    |       |           |             |
|                  | AD24 | 5,375,146       | 12/1994 | Chalmers                |       |           |             |
|                  | AE24 | 5,379,040       | 01/1995 | Mizomoto <i>et al.</i>  |       |           |             |
|                  | AF24 | 5,379,141       | 01/1995 | Thompson <i>et al.</i>  |       |           |             |
|                  | AG24 | 5,388,063       | 02/1995 | Takatori <i>et al.</i>  |       |           |             |
|                  | AH24 | 5,390,364       | 02/1995 | Webster <i>et al.</i>   |       |           |             |
|                  | AI24 | 5,400,084       | 03/1995 | Scarpa                  |       |           |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ24 |                 |      |         |       |           | Yes<br>No   |
|                  | AK24 |                 |      |         |       |           | Yes<br>No   |
|                  | AL24 |                 |      |         |       |           | Yes<br>No   |
|                  | AM24 |                 |      |         |       |           | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|  |    |      |   |
|--|----|------|---|
|  | AN | 24 ✓ | Press Release, "Parkervision, Inc. Announces Joint Product Developments With VTEL," Lippert/Heilshorn and Associates, 2 Pages (March 21, 1995).             |
|  | AO | 24 ✓ | Press Release, "Parkervision, Inc. Announces First Quarter Financial Results," Lippert/Heilshorn and Associates, 3 Pages (April 28, 1995).                  |
|  | AP | 24 ✓ | Press Release, "Parkervision Wins Top 100 Product Districts' Choice Award," Parkervision Marketing and Manufacturing Headquarters, 1 Page (June 29, 1995).  |
|  | AQ | 24 ✓ | Press Release, "Parkervision National Sales Manager Next President of USDLA," Parkervision Marketing and Manufacturing Headquarters, 1 Page (July 6, 1995). |
|  | AR | 24 ✓ | Press Release, "Parkervision Granted New Patent," Parkervision Marketing and Manufacturing Headquarters, 1 Page (July 21, 1995).                            |

|                                 |                                   |
|---------------------------------|-----------------------------------|
| EXAMINER<br><i>D-H. Malzahn</i> | DATE CONSIDERED<br><i>9/21/04</i> |
|---------------------------------|-----------------------------------|

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

|   |                                  |                               |
|---|----------------------------------|-------------------------------|
| FORM PTO-1449<br>INFORMATION DISCLOSURE STATEMENT | ATTY. DOCKET NO.<br>1744.1200001 | APPLICATION NO.<br>09/987,193 |
|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL |      | DOCUMENT<br>NUMBER | DATE    | NAME          | CLASS | SUB-<br>CLASS | FILING DATE |
|---------------------|------|--------------------|---------|---------------|-------|---------------|-------------|
|                     | AA25 | 5,404,127          | 04/1995 | Lee et al.    |       |               |             |
|                     | AB25 | 5,410,541          | 04/1995 | Hotto         |       |               |             |
|                     | AC25 | 5,410,743          | 04/1995 | Seely et al.  |       |               |             |
|                     | AD25 | 5,412,352          | 05/1995 | Graham        |       |               |             |
|                     | AE25 | 5,416,803          | 05/1995 | Janer         |       |               |             |
|                     | AF25 | 5,422,913          | 06/1995 | Wilkinson     |       |               |             |
|                     | AG25 | 5,423,082          | 06/1995 | Cygan et al.  |       |               |             |
|                     | AH25 | 5,428,638          | 06/1995 | Cioffi et al. |       |               |             |
|                     | AI25 | 5,428,640          | 06/1995 | Townley       |       |               |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ25 |                 |      |         |       |               | Yes<br>No   |
|                     | AK25 |                 |      |         |       |               | Yes<br>No   |
|                     | AL25 |                 |      |         |       |               | Yes<br>No   |
|                     | AM25 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|  |    |    |   |  |
|--|----|----|---|--|
|  | AN | 25 | ✓ | Press Release, "Parkervision, Inc. Announces Second Quarter and Six Months Financial Results," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (July 31, 1995).       |
|  | AO | 25 | ✓ | Press Release, "Parkervision, Inc. Expands Its Cameraman System II Product Line," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (September 22, 1995).               |
|  | AP | 25 | ✓ | Press Release, "Parkervision Announces New Camera Control Technology," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 25, 1995).                            |
|  | AQ | 25 | ✓ | Press Release, "Parkervision, Inc. Announces Completion of VTEL/Parkervision Joint Product Line," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 30, 1995). |
|  | AR | 25 | ✓ | Press Release, "Parkervision, Inc. Announces Third Quarter and Nine Months Financial Results," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 30, 1995).    |

EXAMINER

D. H. Malzahn

DATE CONSIDERED

9/21/04

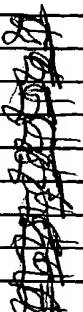
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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## INFORMATION DISCLOSURE STATEMENT

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1744.1200001APPLICATION NO.  
09/987,193APPLICANT  
Rawlins et al.FILING DATE  
November 13, 2001GROUP  
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



## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL   |      | DOCUMENT<br>NUMBER | DATE    | NAME            | CLASS | SUB-<br>CLASS | FILING DATE |
|---|------|--------------------|---------|-----------------|-------|---------------|-------------|
|  | AA26 | 5,434,546          | 07/1995 | Palmer          |       |               |             |
|   | AB26 | 5,438,692          | 08/1995 | Mohindra        |       |               |             |
|   | AC26 | 5,444,415          | 08/1995 | Dent et al.     |       |               |             |
|   | AD26 | 5,444,416          | 08/1995 | Ishikawa et al. |       |               |             |
|   | AE26 | 5,444,865          | 08/1995 | Heck et al.     |       |               |             |
|   | AF26 | 5,446,421          | 08/1995 | Kechkaylo       |       |               |             |
|   | AG26 | 5,446,422          | 08/1995 | Mattila et al.  |       |               |             |
|   | AH26 | 5,448,602          | 09/1995 | Ohmori et al.   |       |               |             |
|   | AI26 | 5,451,899          | 09/1995 | Lawton          |       |               |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ26 |                 |      |         |       |               | Yes<br>No   |
|                     | AK26 |                 |      |         |       |               | Yes<br>No   |
|                     | AL26 |                 |      |         |       |               | Yes<br>No   |
|                     | AM26 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|   |    |    |  |
|---|----|----|--|
|  | AN | 26 | Press Release, "Parkervision's Cameraman Personal Locator Camera System Wins Telecon XV Award," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (November 1, 1995). |
|  | AO | 26 | Press Release, "Parkervision, Inc. Announces Purchase Commitment From VTEL Corporation," Parkervision Marketing and Manufacturing Headquarters, 1 Page (February 26, 1996).        |
|  | AP | 26 | Press Release, "ParkerVision, Inc. Announces Fourth Quarter and Year End Results," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (February 27, 1996).             |
|  | AQ | 26 | Press Release, "ParkerVision, Inc. Expands its Product Line," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (March 7, 1996).                                      |
|  | AR | 26 | Press Release, "ParkerVision Files Patents for its Research of Wireless Technology," Parkervision Marketing and Manufacturing Headquarters, 1 Page (March 28, 1996).               |

EXAMINER

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9/21/84

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| FORM PTO-1449<br>INFORMATION DISCLOSURE STATEMENT | ATTY. DOCKET NO.<br>1744.1200001 | APPLICATION NO.<br>09/987,193 |
|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |






## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL   |  | DOCUMENT<br>NUMBER | DATE      | NAME    | CLASS            | SUB-<br>CLASS | FILING DATE |
|---|--|--------------------|-----------|---------|------------------|---------------|-------------|
|  |  | AA27               | 5,454,007 | 09/1995 | Dutta            |               |             |
|   |  | AB27               | 5,454,009 | 09/1995 | Fruit et al.     |               |             |
|   |  | AC27               | 5,463,356 | 10/1995 | Palmer           |               |             |
|   |  | AD27               | 5,463,357 | 10/1995 | Hobden           |               |             |
|   |  | AE27               | 5,465,071 | 11/1995 | Kobayashi et al. |               |             |
|   |  | AF27               | 5,465,410 | 11/1995 | Hiben et al.     |               |             |
|   |  | AG27               | 5,465,415 | 11/1995 | Bien             |               |             |
|   |  | AH27               | 5,471,162 | 11/1995 | McEwan           |               |             |
|   |  | AI27               | 5,479,120 | 12/1995 | McEwan           |               |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ27 |                 |      |         |       |               | Yes<br>No   |
|                     | AK27 |                 |      |         |       |               | Yes<br>No   |
|                     | AL27 |                 |      |         |       |               | Yes<br>No   |
|                     | AM27 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|   |    |    |  |
|---|----|----|--|
|  | AN | 27 | Press Release, "Parkervision, Inc. Announces First Significant Sale of Its Cameraman® Three-Chip System," Parkervision Marketing and Manufacturing Headquarters, 2 pages (April 12, 1996). |
|  | AO | 27 | Press Release, "Parkervision, Inc. Introduces New Product Line For Studio Production Market," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (April 15, 1996).             |
|  | AP | 27 | Press Release, "Parkervision, Inc. Announces Private Placement of 800,000 Shares," Parkervision Marketing and Manufacturing Headquarters, 1 Page (April 15, 1996).                         |
|  | AQ | 27 | Press Release, "Parkervision, Inc. Announces First Quarter Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (April 30, 1996).                            |
|  | AR | 27 | Press Release, "ParkerVision's New Studio Product Wins Award," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (June 5, 1996).  |

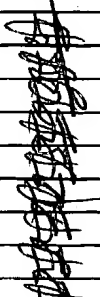
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|----------|---------------|-----------------|---------|
| EXAMINER | D. H. Malzahn | DATE CONSIDERED | 9/21/04 |
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


INFORMATION DISCLOSURE STATEMENTATTY. DOCKET NO.  
1744.1200001APPLICATION NO.  
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Rawlins et al.FILING DATE  
November 13, 2001GROUP  
2124**U.S. PATENT DOCUMENTS**

| EXAMINER<br>INITIAL   |      | DOCUMENT<br>NUMBER | DATE    | NAME             | CLASS | SUB-<br>CLASS | FILING DATE |
|---|------|--------------------|---------|------------------|-------|---------------|-------------|
|  | AA28 | 5,479,447          | 12/1995 | Chow et al.      |       |               |             |
|   | AB28 | 5,483,193          | 01/1996 | Kennedy et al.   |       |               |             |
|   | AC28 | 5,483,549          | 01/1996 | Weinberg et al.  |       |               |             |
|   | AD28 | 5,483,691          | 01/1996 | Heck et al.      |       |               |             |
|   | AE28 | 5,490,173          | 02/1996 | Whikehart et al. |       |               |             |
|   | AF28 | 5,493,581          | 02/1996 | Young et al.     |       |               |             |
|   | AG28 | 5,493,721          | 02/1996 | Reis             |       |               |             |
|   | AH28 | 5,495,200          | 02/1996 | Kwan et al.      |       |               |             |
|   | AI28 | 5,495,202          | 02/1996 | Hsu              |       |               |             |

**FOREIGN PATENT DOCUMENTS**

| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ28 |                 |      |         |       |               | Yes<br>No   |
|                     | AK28 |                 |      |         |       |               | Yes<br>No   |
|                     | AL28 |                 |      |         |       |               | Yes<br>No   |
|                     | AM28 |                 |      |         |       |               | Yes<br>No   |

**OTHER (Including Author, Title, Date, Pertinent Pages, etc.)**

|   |    |    |   |   |
|---|----|----|---|---|
|  | AN | 28 | ✓ | Press Release, "Parkervision, Inc. Announces Second Quarter and Six Months Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (August 1, 1996).   |
|  | AO | 28 | ✓ | Press Release, "Parkervision, Inc. Announces Third Quarter and Nine Months Financial Results," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 29, 1996). |
|  | AP | 28 | ✓ | Press Release, "PictureTel and ParkerVision Sign Reseller Agreement," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 30, 1996).                          |
|  | AQ | 28 | ✓ | Press Release, "CLI and ParkerVision Bring Enhanced Ease-of-Use to Videoconferencing," CLI/Parkervision, 2 Pages (January 20, 1997).  |
|  | AR | 28 | ✓ | Press Release, "Parkervision, Inc. Announces Fourth Quarter and Year End Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (February 27, 1997).            |

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|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |

## U.S. PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE    | NAME              | CLASS | SUB-CLASS | FILING DATE |
|------------------|------|-----------------|---------|-------------------|-------|-----------|-------------|
|                  | AA29 | 5,495,500       | 02/1996 | Jovanovich et al. |       |           |             |
|                  | AB29 | 5,499,267       | 03/1996 | Ohe et al.        |       |           |             |
|                  | AC29 | 5,500,758       | 03/1996 | Thompson et al.   |       |           |             |
|                  | AD29 | 5,517,688       | 05/1996 | Fajen et al.      |       |           |             |
|                  | AE29 | 5,519,890       | 05/1996 | Pinckley          |       |           |             |
|                  | AF29 | 5,523,719       | 06/1996 | Longo et al.      |       |           |             |
|                  | AG29 | 5,523,726       | 06/1996 | Kroeger et al.    |       |           |             |
|                  | AH29 | 5,523,760       | 06/1996 | McEwan            |       |           |             |
|                  | AI29 | 5,539,770       | 07/1996 | Ishigaki          |       |           |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ29 |                 |      |         |       |           | Yes<br>No   |
|                  | AK29 |                 |      |         |       |           | Yes<br>No   |
|                  | AL29 |                 |      |         |       |           | Yes<br>No   |
|                  | AM29 |                 |      |         |       |           | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|  |    |    |   |
|--|----|----|---|
|  | AN | 29 | Press Release, "Parkervision, Inc. Announces First Quarter Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (April 29, 1997).                           |
|  | AO | 29 | Press Release, "NEC and Parkervision Make Distance Learning Closer," NEC America, 2 Pages (June 18, 1997).  |
|  | AP | 29 | Press Release, "Parkervision Supplies JPL with Robotic Cameras, Cameraman Shot Director for Mars Mission," Parkervision Marketing and Manufacturing Headquarters, 2 pages (July 8, 1997). |
|  | AQ | 29 | Press Release, "ParkerVision and IBM Join Forces to Create Wireless Computer Peripherals," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (July 23, 1997).                |
|  | AR | 29 | Press Release, "ParkerVision, Inc. Announces Second Quarter and Six Months Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (July 31, 1997).            |

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D. H. Malczuk

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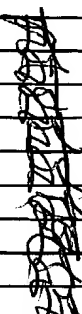
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Rawlins et al.FILING DATE  
November 13, 2001GROUP  
2124




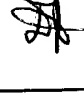

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL   |      | DOCUMENT<br>NUMBER | DATE    | NAME             | CLASS | SUB-<br>CLASS | FILING DATE |
|---|------|--------------------|---------|------------------|-------|---------------|-------------|
|  | AA30 | 5,555,453          | 09/1996 | Kajimoto et al.  |       |               |             |
|   | AB30 | 5,557,641          | 09/1996 | Weinberg         |       |               |             |
|   | AC30 | 5,557,642          | 09/1996 | Williams         |       |               |             |
|   | AD30 | 5,579,341          | 11/1996 | Smith et al.     |       |               |             |
|   | AE30 | 5,579,347          | 11/1996 | Lindquist et al. |       |               |             |
|   | AF30 | 5,584,068          | 12/1996 | Mohindra         |       |               |             |
|   | AG30 | 5,592,131          | 01/1997 | Labreche et al.  |       |               |             |
|   | AH30 | 5,602,847          | 02/1997 | Pagano et al.    |       |               |             |
|   | AI30 | 5,602,868          | 02/1997 | Wilson           |       |               |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ30 |                 |      |         |       |               | Yes<br>No   |
|                     | AK30 |                 |      |         |       |               | Yes<br>No   |
|                     | AL30 |                 |      |         |       |               | Yes<br>No   |
|                     | AM30 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|   |    |           |  |
|---|----|-----------|--|
|  | AN | <u>30</u> | Press Release, "Parkervision, Inc. Announces Private Placement of 990,000 Shares," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (September 8, 1997).   |
|  | AO | <u>30</u> | Press Release, "Wal-Mart Chooses Parkervision for Broadcast Production," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 24, 1997).  |
|  | AP | <u>30</u> | Press Release, "Parkervision, Inc. Announces Third Quarter Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (October 30, 1997).  |
|  | AQ | <u>30</u> | Press Release, "ParkerVision Announces Breakthrough in Wireless Radio Frequency Technology," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (December 10, 1997).   |
|  | AR | <u>30</u> | Press Release, "Parkervision, Inc. Announces the Appointment of Joseph F. Skovron to the Position of Vice President, Licensing - Wireless Technologies," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (January 9, 1998). |

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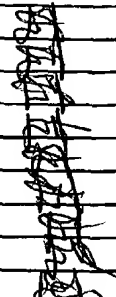
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|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |






## U.S. PATENT DOCUMENTS

| EXAMINER INITIAL  |      | DOCUMENT NUMBER | DATE    | NAME          | CLASS | SUB-CLASS | FILING DATE |
|---|------|-----------------|---------|---------------|-------|-----------|-------------|
|  | AA31 | 5,604,732       | 02/1997 | Kim et al.    |       |           |             |
|   | AB31 | 5,608,531       | 03/1997 | Honda et al.  |       |           |             |
|   | AC31 | 5,610,946       | 03/1997 | Tanaka et al. |       |           |             |
|   | AD31 | RE 35,494       | 04/1997 | Nicollini     |       |           |             |
|   | AE31 | 5,617,451       | 04/1997 | Mimura et al. |       |           |             |
|   | AF31 | 5,619,538       | 04/1997 | Sempel et al. |       |           |             |
|   | AG31 | 5,621,455       | 04/1997 | Rogers et al. |       |           |             |
|   | AH31 | 5,630,227       | 05/1997 | Bella et al.  |       |           |             |
|   | AI31 | 5,640,415       | 06/1997 | Pandula       |       |           |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ31 |                 |      |         |       |           | Yes<br>No   |
|                  | AK31 |                 |      |         |       |           | Yes<br>No   |
|                  | AL31 |                 |      |         |       |           | Yes<br>No   |
|                  | AM31 |                 |      |         |       |           | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|   |    |    |   |
|---|----|----|---|
|  | AN | 31 | Press Release, "Parkervision Announces Existing Agreement with IBM Terminates-- Company Continues with Strategic Focus Announced in December," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (January 27, 1998). |
|  | AO | 31 | Press Release, "Laboratory Tests Verify Parkervision Wireless Technology," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (March 3, 1998).  |
|  | AP | 31 | Press Release, "Parkervision, Inc. Announces Fourth Quarter and Year End Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (March 5, 1998).  |
|  | AQ | 31 | Press Release, "Parkervision Awarded Editors' Pick of Show for NAB 98," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (April 15, 1998).  |
|  | AR | 31 | Press Release, "Parkervision Announces First Quarter Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (May 4, 1998).  |

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| EXAMINER | D-H. Malzahn | DATE CONSIDERED | 9/21/04 |
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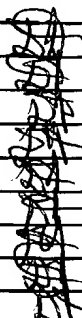
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| EXAMINER<br>INITIAL   |      | DOCUMENT<br>NUMBER | DATE    | NAME            | CLASS | SUB-<br>CLASS | FILING DATE |
|---|------|--------------------|---------|-----------------|-------|---------------|-------------|
|  | AA32 | 5,640,424          | 06/1997 | Banavong et al. |       |               |             |
|   | AB32 | 5,640,428          | 06/1997 | Abe et al.      |       |               |             |
|   | AC32 | 5,640,698          | 06/1997 | Shen et al.     |       |               |             |
|   | AD32 | 5,648,985          | 07/1997 | Bjerede et al.  |       |               |             |
|   | AE32 | 5,650,785          | 07/1997 | Rodal           |       |               |             |
|   | AF32 | 5,661,424          | 08/1997 | Tang            |       |               |             |
|   | AG32 | 5,663,878          | 09/1997 | Walker          |       |               |             |
|   | AH32 | 5,663,986          | 09/1997 | Striffler       |       |               |             |
|   | AI32 | 5,668,836          | 09/1997 | Smith et al.    |       |               |             |

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| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ32 |                 |      |         |       |               | Yes<br>No   |
|                     | AK32 |                 |      |         |       |               | Yes<br>No   |
|                     | AL32 |                 |      |         |       |               | Yes<br>No   |
|                     | AM32 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|   |    |           |  |
|---|----|-----------|--|
|  | AN | <u>32</u> | Press Release, "Parkervision 'DIRECT2DATA' Introduced in Response to Market Demand," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (July 9, 1998).          |
|  | AO | <u>32</u> | Press Release, "Parkervision Expands Senior Management Team," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (July 29, 1998).                                |
|  | AP | <u>32</u> | Press Release, "Parkervision Announces Second Quarter and Six Month Financial Results," Parkervision Marketing and Manufacturing Headquarters, 4 Pages (July 30, 1998).      |
|  | AQ | <u>32</u> | Press Release, "Parkervision Announces Third Quarter and Nine Month Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (October 30, 1998).   |
|  | AR | <u>32</u> | Press Release, "Questar Infocomm, Inc. Invests \$5 Million in Parkervision Common Stock," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (December 2, 1998). |

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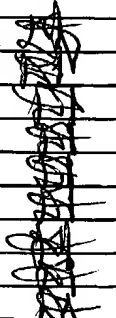
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| EXAMINER<br>INITIAL   |      | DOCUMENT<br>NUMBER | DATE    | NAME             | CLASS | SUB-<br>CLASS | FILING DATE |
|---|------|--------------------|---------|------------------|-------|---------------|-------------|
|  | AA33 | 5,680,078          | 10/1997 | Arie             |       |               |             |
|   | AB33 | 5,680,418          | 10/1997 | Croft et al.     |       |               |             |
|   | AC33 | 5,689,413          | 11/1997 | Jaramillo et al. |       |               |             |
|   | AD33 | 5,699,006          | 12/1997 | Zelev et al.     |       |               |             |
|   | AE33 | 5,705,955          | 01/1998 | Freeburg et al.  |       |               |             |
|   | AF33 | 5,710,998          | 01/1998 | Opas             |       |               |             |
|   | AG33 | 5,714,910          | 02/1998 | Skoczen et al.   |       |               |             |
|   | AH33 | 5,715,281          | 02/1998 | Bly et al.       |       |               |             |
|   | AI33 | 5,721,514          | 02/1998 | Crockett et al.  |       |               |             |

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| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ33 |                 |      |         |       |               | Yes<br>No   |
|                     | AK33 |                 |      |         |       |               | Yes<br>No   |
|                     | AL33 |                 |      |         |       |               | Yes<br>No   |
|                     | AM33 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|   |    |    |  |
|---|----|----|--|
|  | AN | 33 | Press Release, "Parkervision Adds Two New Directors," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (March 5, 1999).                                      |
|  | AO | 33 | Press Release, "Parkervision Announces Fourth Quarter and Year End Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (March 5, 1999).     |
|  | AP | 33 | Press Release, "Joint Marketing Agreement Offers New Automated Production Solution," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (April 13, 1999).      |
|  | AQ | 33 | "Project COST 205: Scintillations in Earth-satellite links," <i>Alta Frequenza: Scientific Review in Electronics</i> , AEI, Vol. LIV, No. 3, pp. 209-211 (May-June, 1985). |
|  | AR | 33 | Razavi, B., <i>RF Microelectronics</i> , Prentice-Hall, pp. 147-149 (1998).  |

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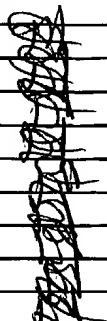
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| EXAMINER<br>INITIAL  |      | DOCUMENT<br>NUMBER | DATE    | NAME           | CLASS | SUB-<br>CLASS | FILING DATE |
|--|------|--------------------|---------|----------------|-------|---------------|-------------|
|  | AA34 | 5,724,002          | 03/1998 | Hulick         |       |               |             |
|  | AB34 | 5,724,653          | 03/1998 | Baker et al.   |       |               |             |
|  | AC34 | 5,729,577          | 03/1998 | Chen           |       |               |             |
|  | AD34 | 5,729,829          | 03/1998 | Talwar et al.  |       |               |             |
|  | AE34 | 5,732,333          | 03/1998 | Cox et al.     |       |               |             |
|  | AF34 | 5,736,895          | 04/1998 | Yu et al.      |       |               |             |
|  | AG34 | 5,737,035          | 04/1998 | Rotzoll        |       |               |             |
|  | AH34 | 5,742,189          | 04/1998 | Yoshida et al. |       |               |             |
|  | AI34 | 5,748,683          | 05/1998 | Smith et al.   |       |               |             |

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| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ34 |                 |      |         |       |               | Yes<br>No   |
|                     | AK34 |                 |      |         |       |               | Yes<br>No   |
|                     | AL34 |                 |      |         |       |               | Yes<br>No   |
|                     | AM34 |                 |      |         |       |               | Yes<br>No   |

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|---|----|----|---|
|  | AN | 34 | Reeves, R.J.D., "The Recording and Collocation of Waveforms (Part 1)," <i>Electronic Engineering</i> , Morgan Brothers Limited, Vol. 31, No. 373, pp. 130-137 (March 1959).                             |
|  | AO | 34 | Reeves, R.J.D., "The Recording and Collocation of Waveforms (Part 2)," <i>Electronic Engineering</i> , Morgan Brothers Limited, Vol. 31, No. 374, pp. 204-212 (April 1959).                             |
|  | AP | 34 | Rein, H.M. and Zahn, M., "Subnanosecond-Pulse Generator with Variable Pulsewidth Using Avalanche Transistors," <i>Electronics Letters</i> , IEE, Vol. 11, No. 1, pp. 21-23 (January 9, 1975).           |
|  | AQ | 34 | Riad, S.M. and Nahman, N.S., "Modeling of the Feed-through Wideband (DC to 12.4 Ghz) Sampling-Head," <i>IEEE MTT-S International Microwave Symposium Digest</i> , IEEE, pp. 267-269 (June 27-29, 1978). |
|  | AR | 34 | Rizzoli, V. et al., "Computer-Aided Noise Analysis of MESFET and HEMT Mixers," <i>IEEE Transactions on Microwave Theory and Techniques</i> , IEEE, Vol. 37, No. 9, pp. 1401-1410 (September 1989).      |

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|   |                                  |                               |
|---|----------------------------------|-------------------------------|
| FORM PTO-1449<br>INFORMATION DISCLOSURE STATEMENT | ATTY. DOCKET NO.<br>1744.1200001 | APPLICATION NO.<br>09/987,193 |
|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |
|   |                                  |                               |

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| EXAMINER<br>INITIAL |      | DOCUMENT<br>NUMBER | DATE    | NAME            | CLASS | SUB-<br>CLASS | FILING DATE |
|---------------------|------|--------------------|---------|-----------------|-------|---------------|-------------|
|                     | AA35 | RE 35,829          | 06/1998 | Sanderford, Jr. |       |               |             |
|                     | AB35 | 5,760,645          | 06/1998 | Comte et al.    |       |               |             |
|                     | AC35 | 5,764,087          | 06/1998 | Clark           |       |               |             |
|                     | AD35 | 5,767,726          | 06/1998 | Wang            |       |               |             |
|                     | AE35 | 5,768,118          | 06/1998 | Faulk et al.    |       |               |             |
|                     | AF35 | 5,771,442          | 06/1998 | Wang et al.     |       |               |             |
|                     | AG35 | 5,777,692          | 07/1998 | Ghosh           |       |               |             |
|                     | AH35 | 5,777,771          | 07/1998 | Smith           |       |               |             |
|                     | AI35 | 5,786,844          | 07/1998 | Rogers et al.   |       |               |             |

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| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ35 |                 |      |         |       |               | Yes<br>No   |
|                     | AK35 |                 |      |         |       |               | Yes<br>No   |
|                     | AL35 |                 |      |         |       |               | Yes<br>No   |
|                     | AM35 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|  |    |    |  |
|--|----|----|--|
|  | AN | 35 | Rowe, H.E., <i>Signals and Noise in Communication Systems</i> , D. Van Nostrand Company, Inc., Princeton, New Jersey, including, for example, Chapter V, Pulse Modulation Systems (1965).  |
|  | AO | 35 | Rücker, F. and Dintelmann, F., "Effect of Antenna Size on OTS Signal Scintillations and Their Seasonal Dependence," <i>Electronics Letters</i> , IEE, Vol. 19, No. 24, pp. 1032-1034 (November 24, 1983).  |
|  | AP | 35 | Russell, R. and Hoare, L., "Millimeter Wave Phase Locked Oscillators," <i>Military Microwaves '78 Conference Proceedings</i> , Microwave Exhibitions and Publishers, pp. 238-242 (October 25-27, 1978).  |
|  | AQ | 35 | Sabel, L.P., "A DSP Implementation of a Robust Flexible Receiver/Demultiplexer for Broadcast Data Satellite Communications," <i>The Institution of Engineers Australia Communications Conference</i> , Institution of Engineers, Australia, pp. 218-223 (October 16-18, 1990). |
|  | AR | 35 | Salous, S., "IF digital generation of FMCW waveforms for wideband channel characterization," <i>IEE Proceedings-I</i> , IEE, Vol. 139, No. 3, pp. 281-288 (June 1992).   |

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|---|----------------------------------|-------------------------------|
| FORM PTO-1449<br>INFORMATION DISCLOSURE STATEMENT | ATTY. DOCKET NO.<br>1744.1200001 | APPLICATION NO.<br>09/987,193 |
|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL |      | DOCUMENT<br>NUMBER | DATE    | NAME             | CLASS | SUB-<br>CLASS | FILING DATE |
|---------------------|------|--------------------|---------|------------------|-------|---------------|-------------|
|                     | AA36 | 5,793,801          | 08/1998 | Fertner          |       |               |             |
|                     | AB36 | 5,793,818          | 08/1998 | Claydon et al.   |       |               |             |
|                     | AC36 | 5,802,463          | 09/1998 | Zuckerman        |       |               |             |
|                     | AD36 | 5,809,060          | 09/1998 | Cafarella et al. |       |               |             |
|                     | AE36 | 5,818,582          | 10/1998 | Fernandez et al. |       |               |             |
|                     | AF36 | 5,825,254          | 10/1998 | Lee              |       |               |             |
|                     | AG36 | 5,834,985          | 11/1998 | Sundegård        |       |               |             |
|                     | AH36 | 5,864,754          | 01/1999 | Hotto            |       |               |             |
|                     | AI36 | 5,881,375          | 03/1999 | Bonds            |       |               |             |

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| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ36 |                 |      |         |       |               | Yes<br>No   |
|                     | AK36 |                 |      |         |       |               | Yes<br>No   |
|                     | AL36 |                 |      |         |       |               | Yes<br>No   |
|                     | AM36 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|  |    |    |   |
|--|----|----|---|
|  | AN | 36 | "Sampling Loops Lock Sources to 23 Ghz," <i>Microwaves &amp; RF</i> , Penton Publishing, p. 212 (September 1990).   |
|  | AO | 36 | Sasikumar, M. et al., "Active Compensation in the Switched-Capacitor Biquad," <i>Proceedings of the IEEE</i> , IEEE, Vol. 71, No. 8, pp. 1008-1009 (August 1983).   |
|  | AP | 36 | Saul, P.H., "A GaAs MESFET Sample and Hold Switch," <i>Fifth European Solid State Circuits Conference-ESSCIRC 79</i> , IEE, pp. 5-7 (1979).   |
|  | AQ | 36 | Shen, D.H. et al., "A 900-MHZ RF Front-End with Integrated Discrete-Time Filtering," <i>IEEE Journal of Solid-State Circuits</i> , IEEE Solid-State Circuits Council, Vol. 31, No. 12, pp. 1945-1954 (December 1996).       |
|  | AR | 36 | Shen, X.D. and Vilar, E., "Anomalous transhorizon propagation and meteorological processes of a multilink path," <i>Radio Science</i> , American Geophysical Union, Vol. 30, No. 5, pp. 1467-1479 (September-October 1995). |

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9/21/04

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|   | APPLICANT<br>Rawlins <i>et al.</i> |                               |
|   | FILING DATE<br>November 13, 2001   | GROUP<br>2124                 |

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL |  | DOCUMENT<br>NUMBER | DATE      | NAME    | CLASS                  | SUB-<br>CLASS | FILING DATE |
|---------------------|--|--------------------|-----------|---------|------------------------|---------------|-------------|
|                     |  | AA37               | 5,892,380 | 04/1999 | Quist                  |               |             |
|                     |  | AB37               | 5,894,239 | 04/1999 | Bonaccio <i>et al.</i> |               |             |
|                     |  | AC37               | 5,896,562 | 04/1999 | Heinonen               |               |             |
|                     |  | AD37               | 5,900,747 | 05/1999 | Brauns                 |               |             |
|                     |  | AE37               | 5,901,054 | 05/1999 | Leu <i>et al.</i>      |               |             |
|                     |  | AF37               | 5,901,187 | 05/1999 | linuma                 |               |             |
|                     |  | AG37               | 5,901,344 | 05/1999 | Opas                   |               |             |
|                     |  | AH37               | 5,901,347 | 05/1999 | Chambers <i>et al.</i> |               |             |
|                     |  | AI37               | 5,901,348 | 05/1999 | Bang <i>et al.</i>     |               |             |

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| EXAMINER<br>INITIAL |  | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|--|-----------------|------|---------|-------|---------------|-------------|
|                     |  | AJ37            |      |         |       |               | Yes<br>No   |
|                     |  | AK37            |      |         |       |               | Yes<br>No   |
|                     |  | AL37            |      |         |       |               | Yes<br>No   |
|                     |  | AM37            |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|  |    |    |  |
|--|----|----|--|
|  | AN | 37 | Shen, X. and Tawfik, A.N., "Dynamic Behaviour of Radio Channels Due to Trans-Horizon Propagation Mechanisms," <i>Electronics Letters</i> , IEE, Vol. 29, No. 17, pp. 1582-1583 (August 19, 1993).  |
|  | AO | 37 | Shen, X. <i>et al.</i> , "Modeling Enhanced Spherical Diffraction and Troposcattering on a Transhorizon Path with aid of the parabolic Equation and Ray Tracing Methods," <i>IEE Colloquium on Common modeling techniques for electromagnetic wave and acoustic wave propagation</i> , IEE, pp. 4/1-4/7 (March 8, 1996). |
|  | AP | 37 | Shen, X. and Vilar, E., "Path loss statistics and mechanisms of transhorizon propagation over a sea path," <i>Electronics Letters</i> , IEE, Vol. 32, No. 3, pp. 259-261 (February 1, 1996).   |
|  | AQ | 37 | Shen, D. <i>et al.</i> , "A 900 MHZ Integrated Discrete-Time Filtering RF Front-End," <i>IEEE International Solid State Circuits Conference</i> , IEEE, Vol. 39, pp. 54-55 and 417 (February 1996).  |
|  | AR | 37 | Spiliard, C. <i>et al.</i> , "X-Band Tropospheric Transhorizon Propagation Under Differing Meteorological Conditions," <i>Sixth International Conference on Antennas and Propagation (ICAP 89) Part 2: Propagation</i> , IEE, pp. 451-455 (April 4-7, 1989).   |

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


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| EXAMINER<br>INITIAL  |      | DOCUMENT<br>NUMBER | DATE    | NAME                    | CLASS | SUB-<br>CLASS | FILING DATE |
|--|------|--------------------|---------|-------------------------|-------|---------------|-------------|
|  | AA38 | 5,901,349          | 05/1999 | Guegnaud <i>et al.</i>  |       |               |             |
|  | AB38 | 5,903,178          | 05/1999 | Miyatsuji <i>et al.</i> |       |               |             |
|  | AC38 | 5,903,187          | 05/1999 | Claverie <i>et al.</i>  |       |               |             |
|  | AD38 | 5,903,196          | 05/1999 | Salvi <i>et al.</i>     |       |               |             |
|  | AE38 | 5,903,421          | 05/1999 | Furutani <i>et al.</i>  |       |               |             |
|  | AF38 | 5,903,553          | 05/1999 | Sakamoto <i>et al.</i>  |       |               |             |
|  | AG38 | 5,903,595          | 05/1999 | Suzuki                  |       |               |             |
|  | AH38 | 5,903,609          | 05/1999 | Kool <i>et al.</i>      |       |               |             |
|  | AI38 | 5,903,827          | 05/1999 | Kennan <i>et al.</i>    |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ38 |                 |      |         |       |               | Yes<br>No   |
|                     | AK38 |                 |      |         |       |               | Yes<br>No   |
|                     | AL38 |                 |      |         |       |               | Yes<br>No   |
|                     | AM38 |                 |      |         |       |               | Yes<br>No   |

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|  | AN | <u>38</u> | Stafford, K.R. <i>et al.</i> , "A Complete Monolithic Sample/Hold Amplifier," <i>IEEE Journal of Solid-State Circuits</i> , IEEE, Vol. SC-9, No. 6, pp. 381-387 (December 1974).                   |
|  | AO | <u>38</u> | Staruk, W. Jr. <i>et al.</i> , "Pushing HF Data Rates," <i>Defense Electronics</i> , EW Communications, Vol. 17, No. 5, pp. 211, 213, 215, 217, 220 and 222 (May 1985).                            |
|  | AP | <u>38</u> | Stephenson, A.G., "Digitizing multiple RF signals requires an optimum sampling rate," <i>Electronics</i> , McGraw-Hill, pp. 106-110 (March 27, 1972).  |
|  | AQ | <u>38</u> | Sugarman, R., "Sampling Oscilloscope for Statistically Varying Pulses," <i>The Review of Scientific Instruments</i> , American Institute of Physics, Vol. 28, No. 11, pp. 933-938 (November 1957). |
|  | AR | <u>38</u> | Sylvain, M., "Experimental probing of multipath microwave channels," <i>Radio Science</i> , American Geophysical Union, Vol. 24, No. 2, pp. 160-178 (March-April 1989).                            |

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D.H. Malzahn

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| FORM PTO-1449<br><u>INFORMATION DISCLOSURE STATEMENT</u> | ATTY. DOCKET NO.<br>1744.1200001 | APPLICATION NO.<br>09/987,193 |
|  | APPLICANT<br>Rawlins et al.      |                               |
|  | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |

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| EXAMINER<br>INITIAL |      | DOCUMENT<br>NUMBER | DATE    | NAME             | CLASS | SUB-<br>CLASS | FILING DATE |
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|                     | AA39 | 5,903,854          | 05/1999 | Abe et al.       |       |               |             |
|                     | AB39 | 5,905,449          | 05/1999 | Tsubouchi et al. |       |               |             |
|                     | AC39 | 5,907,149          | 05/1999 | Marckini         |       |               |             |
|                     | AD39 | 5,907,197          | 05/1999 | Faulk            |       |               |             |
|                     | AE39 | 5,911,116          | 06/1999 | Nosswitz         |       |               |             |
|                     | AF39 | 5,911,123          | 06/1999 | Shaffer et al.   |       |               |             |
|                     | AG39 | 5,914,622          | 06/1999 | Inoue            |       |               |             |
|                     | AH39 | 5,920,199          | 07/1999 | Sauer            |       |               |             |
|                     | AI39 | 5,943,370          | 08/1999 | Smith            |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ39 |                 |      |         |       |               | Yes<br>No   |
|                     | AK39 |                 |      |         |       |               | Yes<br>No   |
|                     | AL39 |                 |      |         |       |               | Yes<br>No   |
|                     | AM39 |                 |      |         |       |               | Yes<br>No   |

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|  | AN | 39 | Takano, T., "NOVEL GaAs Pet Phase Detector Operable To Ka Band," <i>IEEE MT-S Digest</i> , IEEE, pp. 381-383 (1984).   |
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|  | AQ | 39 | Tawfik, A.N., "Amplitude, Duration and Predictability of Long Hop Trans-Horizon X-band Signals Over the Sea," <i>Electronics Letters</i> , IEE, Vol. 28, No. 6, pp. 571-572 (March 12, 1992).  |
|  | AR | 39 | Tawfik, A.N. and Vilar, E., "Correlation of Transhorizon Signal Level Strength with Localized Surface Meteorological Parameters," <i>Eighth International Conference on Antennas and Propagation</i> , Electronics Division of the IEE, pp. 335-339 (March 30- April 2, 1993). |

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|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |

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|---------------------|------|--------------------|---------|-----------------|-------|---------------|-------------|
|                     | AA40 | 4,017,798          | 04/1977 | Gordy et al.    |       |               |             |
|                     | AB40 | 4,032,847          | 06/1977 | Unkauf          |       |               |             |
|                     | AC40 | 4,253,067          | 02/1981 | Caples et al.   |       |               |             |
|                     | AD40 | 4,393,395          | 07/1983 | Hacke et al.    |       |               |             |
|                     | AE40 | 4,816,704          | 03/1989 | Fiori, Jr.      |       |               |             |
|                     | AF40 | 4,841,265          | 06/1989 | Watanabe et al. |       |               |             |
|                     | AG40 | 4,943,974          | 07/1990 | Motamedi        |       |               |             |
|                     | AH40 | 5,115,409          | 05/1992 | Stepp           |       |               |             |
|                     | AI40 | 5,353,306          | 10/1994 | Yamamoto        |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ40 |                 |      |         |       |               | Yes<br>No   |
|                     | AK40 |                 |      |         |       |               | Yes<br>No   |
|                     | AL40 |                 |      |         |       |               | Yes<br>No   |
|                     | AM40 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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|  | AN | <u>40</u> | Tawfik, A.N. and Vilar, E., "Dynamic Structure of a Transhorizon Signal at X-band Over a Sea Path," <i>Sixth International Conference on Antennas and Propagation (ICAP 89) Part 2: Propagation</i> , IEE, pp. 446-450 (April 4-7, 1989).   |
|  | AO | <u>40</u> | Tawfik, A.N. and Vilar, E., "Statistics of Duration and Intensity of Path Loss in a Microwave Transhorizon Sea-Path," <i>Electronics Letters</i> , IEE, Vol. 26, No. 7, pp. 474-476 (March 29, 1990).   |
|  | AP | <u>40</u> | Tawfik, A.N. and Vilar, E., "X-Band Transhorizon Measurements of CW Transmissions Over the Sea- Part 1: Path Loss, Duration of Events, and Their Modeling," <i>IEEE Transactions on Antennas and Propagation</i> , IEEE Antennas and Propagation Society, Vol. 41, No. 11, pp. 1491-1500 (November 1993). |
|  | AQ | <u>40</u> | Temes, G.C. and Tsividis, T., "The Special Section on Switched-Capacitor Circuits," <i>Proceedings of the IEEE</i> , IEEE, Vol. 71, No. 8, pp. 915-916 (August 1983).   |
|  | AR | <u>40</u> | Thomas, G.B., <i>Calculus and Analytic Geometry</i> , Third Edition, Addison-Wesley Publishing, pp. 119-133 (1960).   |

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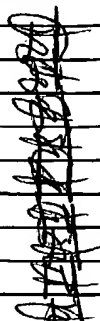
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| EXAMINER<br>INITIAL   |      | DOCUMENT<br>NUMBER | DATE    | NAME            | CLASS | SUB-<br>CLASS | FILING DATE |
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|  | AA41 | 5,515,014          | 05/1996 | Troutman        |       |               |             |
|   | AB41 | 5,563,550          | 10/1996 | Toth            |       |               |             |
|   | AC41 | 5,574,755          | 11/1996 | Persico         |       |               |             |
|   | AD41 | 5,604,592          | 02/1997 | Kotidis et al.  |       |               |             |
|   | AE41 | 5,638,396          | 06/1997 | Klimek          |       |               |             |
|   | AF41 | 5,675,392          | 10/1997 | Nayebi et al.   |       |               |             |
|   | AG41 | 5,694,096          | 12/1997 | Ushiroku et al. |       |               |             |
|   | AH41 | 5,757,870          | 05/1998 | Miya et al.     |       |               |             |
|   | AI41 | 5,768,323          | 06/1998 | Kroeger et al.  |       |               |             |

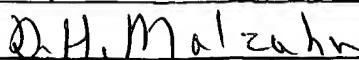
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| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ41 |                 |      |         |       |               | Yes<br>No   |
|                     | AK41 |                 |      |         |       |               | Yes<br>No   |
|                     | AL41 |                 |      |         |       |               | Yes<br>No   |
|                     | AM41 |                 |      |         |       |               | Yes<br>No   |

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|  | AN | 41 | Tomassetti, Q., "An Unusual Microwave Mixer," 16 <sup>th</sup> European Microwave Conference, Microwave Exhibitions and Publishers, pp. 754-759 (September 8-12, 1986).  |
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|  | AP | 41 | Tsividis, Y. and Antognetti, P. (Ed.), Design of MOS VLSI Circuits for Telecommunications, Prentice-Hall, p. 304 (1985).   |
|  | AQ | 41 | Tsividis, Y., "Principles of Operation and Analysis of Switched-Capacitor Circuits," Proceedings of the IEEE, IEEE, Vol. 71, No. 8, pp. 926-940 (August 1983).   |
|  | AR | 41 | Tsurumi, H. and Maeda, T., "Design Study on a Direct Conversion Receiver Front-End for 280 MHz, 900 MHz, and 2.6 Ghz Band Radio Communication Systems," 41 <sup>st</sup> IEEE Vehicular Technology Conference, IEEE Vehicular Technology Society, pp. 457-462 (May 19-22, 1991).     |

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|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |

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|---------------------|--|--------------------|-----------|---------|----------------------|---------------|-------------|
|                     |  | AA42               | 5,770,985 | 06/1998 | Ushiroku et al.      |               |             |
|                     |  | AB42               | 5,778,022 | 07/1998 | Walley               |               |             |
|                     |  | AC42               | 5,812,546 | 09/1998 | Zhou et al.          |               |             |
|                     |  | AD42               | 5,818,869 | 10/1998 | Miya et al.          |               |             |
|                     |  | AE42               | 5,844,449 | 12/1998 | Abeno et al.         |               |             |
|                     |  | AF42               | 5,872,446 | 02/1999 | Cranford, Jr. et al. |               |             |
|                     |  | AG42               | 5,909,447 | 06/1999 | Cox et al.           |               |             |
|                     |  | AH42               | 5,933,467 | 08/1999 | Sehier et al.        |               |             |
|                     |  | AI42               | 5,952,895 | 09/1999 | McCune, Jr. et al.   |               |             |

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|                     |  | AJ42            |      |         |       |               | Yes<br>No   |
|                     |  | AK42            |      |         |       |               | Yes<br>No   |
|                     |  | AL42            |      |         |       |               | Yes<br>No   |
|                     |  | AM42            |      |         |       |               | Yes<br>No   |

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|  | AN | 42 | Valdmanis, J.A. et al., "Picosecond and Subpicosecond Optoelectronics for Measurements of Future High Speed Electronic Devices," <i>IEDM Technical Digest</i> , IEEE, pp. 597-600 (December 5-7, 1983).  |
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|  | AP | 42 | Vasseur, H. and Vanhoenacker, D., "Characterization of tropospheric turbulent layers from radiosonde data," <i>Electronics Letters</i> , IEE, Vol. 34, No. 4, pp. 318-319 (February 19, 1998).   |
|  | AQ | 42 | Verdone, R., "Outage Probability Analysis for Short-Range Communication Systems at 60 Ghz in ATT Urban Environments," <i>IEEE Transactions on Vehicular Technology</i> , IEEE Vehicular Technology Society, Vol. 46, No. 4, pp. 1027-1039 (November 1997). |
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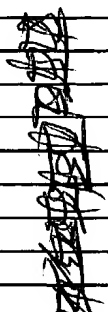
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|  | AA43 | 5,960,033          | 09/1999 | Shibano et al.    |       |               |             |
|   | AB43 | 6,041,073          | 03/2000 | Davidovici et al. |       |               |             |
|   | AC43 | 6,054,889          | 04/2000 | Kobayashi         |       |               |             |
|   | AD43 | 6,084,922          | 07/2000 | Zhou et al.       |       |               |             |
|   | AE43 | 6,125,271          | 09/2000 | Rowland et al.    |       |               |             |
|   | AF43 | 6,147,340          | 11/2000 | Levy              |       |               |             |
|   | AG43 | 6,147,763          | 11/2000 | Steinlechner      |       |               |             |
|   | AH43 | 6,150,890          | 11/2000 | Damgaard et al.   |       |               |             |
|   | AI43 | 5,126,682          | 06/1992 | Weinberg et al.   |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ43 |                 |      |         |       |               | Yes<br>No   |
|                     | AK43 |                 |      |         |       |               | Yes<br>No   |
|                     | AL43 |                 |      |         |       |               | Yes<br>No   |
|                     | AM43 |                 |      |         |       |               | Yes<br>No   |

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|  | AN | 43 | Vilar, E. et al., "A Comprehensive/Selective MM-Wave Satellite Downlink Experiment on Fade Dynamics," <i>Tenth International Conference on Antennas and Propagation</i> , Electronics Division of the IEE, pp. 2.98-2.101 (April 14-17, 1997).        |
|  | AO | 43 | Vilar, E. et al., "A System to Measure LOS Atmospheric Transmittance at 19 Ghz," <i>AGARD Conference Proceedings No. 346: Characteristics of the Lower Atmosphere Influencing Radio Wave Propagation</i> , AGARD, pp. 8-1 - 8-16 (October 4-7, 1983). |
|  | AP | 43 | Vilar, E. and Smith, H., "A Theoretical and Experimental Study of Angular Scintillations in Earth Space Paths," <i>IEEE Transactions on Antennas and Propagation</i> , IEEE, Vol. AP-34, No. 1, pp. 2-10 (January 1986).                              |
|  | AQ | 43 | Vilar, E. et al., "A Wide Band Transhorizon Experiment at 11.6 Ghz," <i>Eighth International Conference on Antennas and Propagation</i> , Electronics Division of the IEE, pp. 441-445 (March 30- April 2, 1993).                                     |
|  | AR | 43 | Vilar, E. and Matthews, P.A., "Amplitude Dependence of Frequency in Oscillators," <i>Electronics Letters</i> , IEE, Vol. 8, No. 20, pp. 509-511 (October 5, 1972).  |

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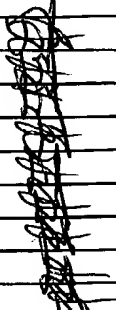
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|  | AA44 | 5,841,811          | 11/1998 | Song               |       |               |             |
|   | AB44 | 4,051,475          | 09/1977 | Campbell           |       |               |             |
|   | AC44 | 5,953,642          | 09/1999 | Feldtkeller et al. |       |               |             |
|   | AD44 | 4,653,117          | 03/1987 | Heck               |       |               |             |
|   | AE44 | 5,859,878          | 01/1999 | Phillips et al.    |       |               |             |
|   | AF44 | 5,894,496          | 04/1999 | Jones              |       |               |             |
|   | AG44 | 5,915,278          | 06/1999 | Mallick            |       |               |             |
|   | AH44 | 6,028,887          | 02/2000 | Harrison et al.    |       |               |             |
|   | AI44 | 6,081,691          | 06/2000 | Renard et al.      |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ44 |                 |      |         |       |               | Yes<br>No   |
|                     | AK44 |                 |      |         |       |               | Yes<br>No   |
|                     | AL44 |                 |      |         |       |               | Yes<br>No   |
|                     | AM44 |                 |      |         |       |               | Yes<br>No   |

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|  | AN | 44 | Vilar, E. et al., "An experimental mm-wave receiver system for measuring phase noise due to atmospheric turbulence," <i>Proceedings of the 25th European Microwave Conference</i> , Nexus House, pp. 114-119 (1995).   |
|  | AO | 44 | Vilar, E. and Burgueño, A., "Analysis and Modeling of Time Intervals Between Rain Rate Exceedances in the Context of Fade Dynamics," <i>IEEE Transactions on Communications</i> , IEEE Communications Society, Vol. 39, No. 9, pp. 1306-1312 (September 1991). |
|  | AP | 44 | Vilar, E. et al., "Angle of Arrival Fluctuations in High and Low Elevation Earth Space Paths," <i>Fourth International Conference on Antennas and Propagation (ICAP 85)</i> , Electronics Division of the IEE, pp. 83-88 (April 16-19, 1985).                  |
|  | AQ | 44 | Vilar, E., "Antennas and Propagation: A Telecommunications Systems Subject," <i>Electronics Division Colloquium on Teaching Antennas and Propagation to Undergraduates</i> , IEE, pp. 7/1-7/6 (March 8, 1988).   |
|  | AR | 44 | Vilar, E. et al., "CERS*. Millimetre-Wave Beacon Package and Related Payload Doppler Correction Strategies," <i>Electronics Division Colloquium on CERS- Communications Engineering Research Satellite</i> , IEE, pp. 10/1-10/10 (April 10, 1984).             |

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## U.S. PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE    | NAME             | CLASS | SUB-CLASS | FILING DATE |
|------------------|------|-----------------|---------|------------------|-------|-----------|-------------|
|                  | AA45 | 6,121,819       | 09/2000 | Traylor          |       |           |             |
|                  | AB45 | 6,144,236       | 11/2000 | Vice et al.      |       |           |             |
|                  | AC45 | 6,144,846       | 11/2000 | Durec            |       |           |             |
|                  | AD45 | 6,175,728 B1    | 01/2001 | Mitama           |       |           |             |
|                  | AE45 | 5,705,949       | 01/1998 | Alelyunas et al. |       |           |             |
|                  | AF45 | 5,883,548       | 03/1999 | Assard et al.    |       |           |             |
|                  | AG45 | 4,484,143       | 11/1984 | French et al.    |       |           |             |
|                  | AH45 | 5,841,324       | 11/1998 | Williams         |       |           |             |
|                  | AI45 | 4,855,894       | 08/1989 | Asahi et al.     |       |           |             |

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| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ45 |                 |      |         |       |           | Yes<br>No   |
|                  | AK45 |                 |      |         |       |           | Yes<br>No   |
|                  | AL45 |                 |      |         |       |           | Yes<br>No   |
|                  | AM45 |                 |      |         |       |           | Yes<br>No   |

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|  | AN | 45 | Vilar, E. and Mousley, T.J., "Comment and Reply: Probability Density Function of Amplitude Scintillations," <i>Electronics Letters</i> , IEE, Vol. 21, No. 14, pp. 620-622 (July 4, 1985).   |
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|  | AP | 45 | Vilar, E., "Depolarization and Field Transmittances in Indoor Communications," <i>Electronics Letters</i> , IEE, Vol. 27, No. 9, pp. 732-733 (April 25, 1991).   |
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|  | AR | 45 | Vilar, E. et al., "Experimental System and Measurements of Transhorizon Signal Levels at 11 Ghz," <i>18th European Microwave Conference</i> , Microwave Exhibitions and Publishers Ltd., pp. 429-435 (September 12 - 15, 1988).                          |

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D.H. Malzahn

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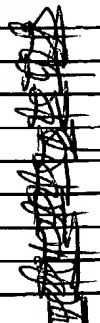
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FORM PTO-1449

## INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.  
1744.1200001APPLICATION NO.  
09/987,193APPLICANT  
Rawlins et al.FILING DATE  
November 13, 2001GROUP  
2124






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| EXAMINER<br>INITIAL   |      | DOCUMENT<br>NUMBER | DATE    | NAME              | CLASS | SUB-<br>CLASS | FILING DATE |
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|  | AA46 | 5,319,799          | 06/1994 | Morita            |       |               |             |
|   | AB46 | 5,801,654          | 09/1998 | Traylor           |       |               |             |
|   | AC46 | 5,369,404          | 11/1994 | Galton            |       |               |             |
|   | AD46 | 3,716,730          | 02/1973 | Cerny, Jr.        |       |               |             |
|   | AE46 | 4,080,573          | 03/1978 | Howell            |       |               |             |
|   | AF46 | 4,334,324          | 06/1982 | Hoover            |       |               |             |
|   | AG46 | 4,369,522          | 01/1983 | Cerny, Jr. et al. |       |               |             |
|   | AH46 | 5,455,418          | 11/1995 | Zhou et al.       |       |               |             |
|   | AI46 | 5,513,389          | 04/1996 | Reeser et al.     |       |               |             |

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| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ46 |                 |      |         |       |               | Yes<br>No   |
|                     | AK46 |                 |      |         |       |               | Yes<br>No   |
|                     | AL46 |                 |      |         |       |               | Yes<br>No   |
|                     | AM46 |                 |      |         |       |               | Yes<br>No   |

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|  | AN | 46 | Vilar, E. and Matthews, P.A., "Importance of Amplitude Scintillations in Millimetric Radio Links," <i>Proceedings of the 4th European Microwave Conference</i> , Microwave Exhibitions and Publishers, pp. 202-206 (September 10-13, 1974).  |
|  | AO | 46 | Vilar, E. and Haddon, J., "Measurement and Modeling of Scintillation Intensity to Estimate Turbulence Parameters in an Earth-Space Path," <i>IEEE Transactions on Antennas and Propagation</i> , IEEE Antennas and Propagation Society, Vol. AP-32, No. 4, pp. 340-346 (April 1984). |
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D.H. Malachuk

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INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.  
1744.120001

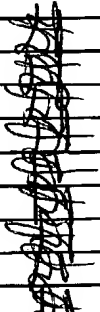
APPLICATION NO.  
09/987,193

APPLICANT  
Rawlins et al.

FILING DATE  
November 13, 2001

GROUP  
2124






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| EXAMINER<br>INITIAL   |      | DOCUMENT<br>NUMBER | DATE    | NAME            | CLASS | SUB-<br>CLASS | FILING DATE |
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|  | AA47 | 5,959,850          | 09/1999 | Lim             |       |               |             |
|   | AB47 | 5,157,687          | 10/1992 | Tymes           |       |               |             |
|   | AC47 | 5,945,660          | 08/1999 | Nakasuji et al. |       |               |             |
|   | AD47 | 6,091,939          | 07/2000 | Banh            |       |               |             |
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|   | AF47 | 6,098,886          | 08/2000 | Swift et al.    |       |               |             |
|   | AG47 | 6,215,475 B1       | 04/2001 | Meyerson et al. |       |               | 06/07/1995  |
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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ47 |                 |      |         |       |               | Yes<br>No   |
|                     | AK47 |                 |      |         |       |               | Yes<br>No   |
|                     | AL47 |                 |      |         |       |               | Yes<br>No   |
|                     | AM47 |                 |      |         |       |               | Yes<br>No   |

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|  | AQ | 47 | Vilar, E., "Some Limitations on Digital Transmission Through Turbulent Atmosphere," <i>International Conference on Satellite Communication Systems Technology</i> , Electronics Division of the IEE, pp. 169-187 (April 7-10, 1975).   |
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D-H. Malzahn

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| FORM PTO-1449<br>INFORMATION DISCLOSURE STATEMENT | ATTY. DOCKET NO.<br>1744.1200001   | APPLICATION NO.<br>09/987,193 |
|   | APPLICANT<br>Rawlins <i>et al.</i> |                               |
|   | FILING DATE<br>November 13, 2001   | GROUP<br>2124                 |

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|                     | AA48 | 6,061,555          | 05/2000 | Bultman <i>et al.</i>  |       |               |             |
|                     | AB48 | 6,091,940          | 07/2000 | Sorrells <i>et al.</i> |       |               |             |
|                     | AC48 | 6,266,518 B1       | 07/2001 | Sorrells <i>et al.</i> |       |               | 08/18/1999  |
|                     | AD48 | 6,353,735 B1       | 03/2002 | Sorrells <i>et al.</i> |       |               | 08/23/1999  |
|                     | AE48 | 6,370,371 B1       | 04/2002 | Sorrells <i>et al.</i> |       |               | 03/03/1999  |
|                     | AF48 | 5,628,055          | 05/1997 | Stein                  |       |               |             |
|                     | AG48 | 5,678,220          | 10/1997 | Fournier               |       |               |             |
|                     | AH48 | 5,926,065          | 07/1999 | Wakai <i>et al.</i>    |       |               |             |
|                     | AI48 | 3,622,885          | 11/1971 | Oberdorf <i>et al.</i> |       |               |             |

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| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ48 |                 |      |         |       |               | Yes<br>No   |
|                     | AK48 |                 |      |         |       |               | Yes<br>No   |
|                     | AL48 |                 |      |         |       |               | Yes<br>No   |
|                     | AM48 |                 |      |         |       |               | Yes<br>No   |

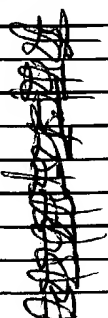
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|  | AR | 48 | Wan, K.W. <i>et al.</i> , "Extended Variances and Autoregressive/Moving Average Algorithm for the Measurement and Synthesis of Oscillator Phase Noise," <i>Proceedings Of the 43rd Annual Symposium on Frequency Control</i> , IEEE, pp. 331-335 (1989).               |

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| EXAMINER   | D.H. Malzahn | DATE CONSIDERED | 9/22/04 |
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| FORM PTO-1449<br>INFORMATION DISCLOSURE STATEMENT | ATTY. DOCKET NO.<br>1744.1200001 | APPLICATION NO.<br>09/987,193 |
|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |






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|  | AB49 | 6,421,534 B1       | 07/2002 | Cook et al.    |       |               | 08/18/1999  |
|  | AC49 | 6,330,244 B1       | 12/2001 | Swartz et al.  |       |               | 01/16/1998  |
|  | AD49 | 4,384,357          | 05/1983 | deBuda et al.  |       |               |             |
|  | AE49 | 4,470,145          | 09/1984 | Williams       |       |               |             |
|  | AF49 | 5,600,680          | 02/1997 | Mishima et al. |       |               |             |
|  | AG49 | 5,606,731          | 02/1997 | Pace et al.    |       |               |             |
|  | AH49 | 5,870,670          | 02/1999 | Ripley et al.  |       |               |             |
|  | AI49 | 6,314,279 B1       | 11/2001 | Mohindra       |       |               | 06/29/1998  |

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| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ49 |                 |      |         |       |               | Yes<br>No   |
|                     | AK49 |                 |      |         |       |               | Yes<br>No   |
|                     | AL49 |                 |      |         |       |               | Yes<br>No   |
|                     | AM49 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|   |    |    |  |
|---|----|----|--|
|  | AN | 49 | Wan, K.W. et al., "Wideband Transhorizon Channel Sounder at 11 Ghz," <i>Electronics Division Colloquium on High Bit Rate UHF/SHF Channel Sounders - Technology and Measurement</i> , IEE, pp. 3/1-3/5 (December 3, 1993).                                      |
|  | AO | 49 | Wang, H., "A 1-V Multigigahertz RF Mixer Core in 0.5 - $\mu$ m CMOS," <i>IEEE Journal of Solid-State Circuits</i> , IEEE Solid-State Circuits Society, Vol. 33, No. 12, pp. 2265-2267 (December 1998).   |
|  | AP | 49 | Watson, A.W.D. et al., "Digital Conversion and Signal Processing for High Performance Communications Receivers," <i>Digital Processing of Signals in Communications</i> , Institution of Electronic and Radio Engineers, pp. 367-373 (April 22nd -26th, 1985). |
|  | AQ | 49 | Weast, R.C. et al. (Ed.), <i>Handbook of Mathematical Tables</i> , Second Edition, The Chemical Rubber Co., pp. 480-485 (1964).  |
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| EXAMINER | D.H. Malzahn | DATE CONSIDERED | 9/22/04 |
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| FORM PTO-1449<br>INFORMATION DISCLOSURE STATEMENT | ATTY. DOCKET NO.<br>1744.1200001 | APPLICATION NO.<br>09/987,193 |
|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |

## U.S. PATENT DOCUMENTS

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|------------------|------|-----------------|---------|-------|-------|-----------|-------------|
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|                  | AB50 |                 |         |       |       |           |             |
|                  | AC50 |                 |         |       |       |           |             |
|                  | AD50 |                 |         |       |       |           |             |
|                  | AE50 |                 |         |       |       |           |             |
|                  | AF50 |                 |         |       |       |           |             |
|                  | AG50 |                 |         |       |       |           |             |
|                  | AH50 |                 |         |       |       |           |             |
|                  | AI50 |                 |         |       |       |           |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ50 |                 |      |         |       |           | Yes<br>No   |
|                  | AK50 |                 |      |         |       |           | Yes<br>No   |
|                  | AL50 |                 |      |         |       |           | Yes<br>No   |
|                  | AM50 |                 |      |         |       |           | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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| EXAMINER |  | DATE CONSIDERED | 1/22/04 |
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| FORM PTO-1449<br><u>INFORMATION DISCLOSURE STATEMENT</u> | ATTY. DOCKET NO.<br>1744.1200001 | APPLICATION NO.<br>09/987,193 |
|  | APPLICANT<br>Rawlins et al.      |                               |
|  | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |






## U.S. PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB-CLASS | FILING DATE |
|------------------|------|-----------------|------|------|-------|-----------|-------------|
|                  | AA51 |                 |      |      |       |           |             |
|                  | AB51 |                 |      |      |       |           |             |
|                  | AC51 |                 |      |      |       |           |             |
|                  | AD51 |                 |      |      |       |           |             |
|                  | AE51 |                 |      |      |       |           |             |
|                  | AF51 |                 |      |      |       |           |             |
|                  | AG51 |                 |      |      |       |           |             |
|                  | AH51 |                 |      |      |       |           |             |
|                  | AI51 |                 |      |      |       |           |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ51 |                 |      |         |       |           | Yes<br>No   |
|                  | AK51 |                 |      |         |       |           | Yes<br>No   |
|                  | AL51 |                 |      |         |       |           | Yes<br>No   |
|                  | AM51 |                 |      |         |       |           | Yes<br>No   |

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|   |    |           |   |
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|  | AQ | <u>51</u> | Miki, S. and Nagahama, R., <i>Modulation System II</i> , Common Edition 7, Kyoritsu Publishing Co., Ltd., pp. 146-154 (April 30, 1956).                                       |
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| EXAMINER | <u>D H. Muzik</u> | DATE CONSIDERED | <u>9/22/04</u> |
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|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |






## U.S. PATENT DOCUMENTS

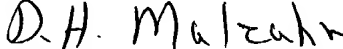
| EXAMINER<br>INITIAL |  | DOCUMENT<br>NUMBER | DATE | NAME | CLASS | SUB-<br>CLASS | FILING DATE |
|---------------------|--|--------------------|------|------|-------|---------------|-------------|
|                     |  | AA52               |      |      |       |               |             |
|                     |  | AB52               |      |      |       |               |             |
|                     |  | AC52               |      |      |       |               |             |
|                     |  | AD52               |      |      |       |               |             |
|                     |  | AE52               |      |      |       |               |             |
|                     |  | AF52               |      |      |       |               |             |
|                     |  | AG52               |      |      |       |               |             |
|                     |  | AH52               |      |      |       |               |             |
|                     |  | AI52               |      |      |       |               |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER<br>INITIAL |  | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
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|                     |  | AJ52            |      |         |       |               | Yes<br>No   |
|                     |  | AK52            |      |         |       |               | Yes<br>No   |
|                     |  | AL52            |      |         |       |               | Yes<br>No   |
|                     |  | AM52            |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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| FORM PTO-1449<br>INFORMATION DISCLOSURE STATEMENT | ATTY. DOCKET NO.<br>1744.1200001 | APPLICATION NO.<br>09/987,193 |
|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |






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|                  | AB53 |                 |      |      |       |           |             |
|                  | AC53 |                 |      |      |       |           |             |
|                  | AD53 |                 |      |      |       |           |             |
|                  | AE53 |                 |      |      |       |           |             |
|                  | AF53 |                 |      |      |       |           |             |
|                  | AG53 |                 |      |      |       |           |             |
|                  | AH53 |                 |      |      |       |           |             |
|                  | AI53 |                 |      |      |       |           |             |

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|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ53 |                 |      |         |       |           | Yes<br>No   |
|                  | AK53 |                 |      |         |       |           | Yes<br>No   |
|                  | AL53 |                 |      |         |       |           | Yes<br>No   |
|                  | AM53 |                 |      |         |       |           | Yes<br>No   |

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|  | APPLICANT<br>Rawlins et al.      |                               |
|  | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |






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|                     | AB54 |                    |      |      |       |               |             |
|                     | AC54 |                    |      |      |       |               |             |
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|                     | AI54 |                    |      |      |       |               |             |

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|                     | AJ54 |                 |      |         |       |               | Yes<br>No   |
|                     | AK54 |                 |      |         |       |               | Yes<br>No   |
|                     | AL54 |                 |      |         |       |               | Yes<br>No   |
|                     | AM54 |                 |      |         |       |               | Yes<br>No   |

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|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 13, 2001 | GROUP<br>2124                 |






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|                     | AG55 |                    |      |      |       |               |             |
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|                     | AK55 |                 |      |         |       |               | Yes<br>No   |
|                     | AL55 |                 |      |         |       |               | Yes<br>No   |
|                     | AM55 |                 |      |         |       |               | Yes<br>No   |

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|                     |  | AK56            |      |         |       |               | Yes<br>No   |
|                     |  | AL56            |      |         |       |               | Yes<br>No   |
|                     |  | AM56            |      |         |       |               | Yes<br>No   |

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|   | AR | <u>56</u> |   |

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